



## Stae

### SDI Limited

Version No: 4.1.1.1

Safety Data Sheet (Conforms to Regulations (EC) No 2015/830)

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Initial Date: Not Available

L.REACH.GBR.EN

## SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

### 1.1. Product Identifier

|                               |                                             |
|-------------------------------|---------------------------------------------|
| Product name                  | Stae                                        |
| Synonyms                      | Not Available                               |
| Proper shipping name          | FLAMMABLE LIQUID, N.O.S. (contains acetone) |
| Other means of identification | Not Available                               |

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

|                          |                                                                     |
|--------------------------|---------------------------------------------------------------------|
| Relevant identified uses | For bonding of composite to tooth surfaces by dental professionals. |
| Uses advised against     | Not Applicable                                                      |

### 1.3. Details of the supplier of the safety data sheet

| Registered company name | SDI Limited                                       | SDI Brazil Industria E Comercio Ltda                                   | SDI Germany GmbH                        |
|-------------------------|---------------------------------------------------|------------------------------------------------------------------------|-----------------------------------------|
| Address                 | 3-15 Brunston Street VIC Bayswater 3153 Australia | Rua Dr. Virgilio de Carvalho Pinto, 612 São Paulo CEP 05415-020 Brazil | Hansestrasse 85 Cologne D-51149 Germany |
| Telephone               | +61 3 8727 7111 (Business Hours)                  | +55 11 3092 7100                                                       | +49 0 2203 9255 0                       |
| Fax                     | +61 3 8727 7222                                   | +55 11 3092 7101                                                       | +49 0 2203 9255 200                     |
| Website                 | www.sdi.com.au                                    | www.sdi.com.au                                                         | www.sdi.com.au                          |
| Email                   | info@sdi.com.au                                   | brasil@sdi.com.au                                                      | germany@sdi.com.au                      |

|                         |                                                     |
|-------------------------|-----------------------------------------------------|
| Registered company name | SDI (North America) Inc.                            |
| Address                 | 1279 Hamilton Parkway IL Itasca 60143 United States |
| Telephone               | +1 630 361 9200 (Business hours)                    |
| Fax                     | Not Available                                       |
| Website                 | Not Available                                       |
| Email                   | USA.Canada@sdi.com.au                               |

### 1.4. Emergency telephone number

|                                   |                       |               |               |
|-----------------------------------|-----------------------|---------------|---------------|
| Association / Organisation        | SDI Limited           | Not Available | Not Available |
| Emergency telephone numbers       | +61 3 8727 7111       | Not Available | Not Available |
| Other emergency telephone numbers | ray.cahill@sdi.com.au | Not Available | Not Available |

|                                   |                 |
|-----------------------------------|-----------------|
| Association / Organisation        | Not Available   |
| Emergency telephone numbers       | +61 3 8727 7111 |
| Other emergency telephone numbers | Not Available   |

## SECTION 2 HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

Considered a dangerous mixture according to Directive 1999/45/EC, Reg. (EC) No 1272/2008 (if applicable) and their amendments.  
Classified as Dangerous Goods for transport purposes.

|                    |                                                                                                                                                |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| DSD classification | In case of mixtures, classification has been prepared by following DPD (Directive 1999/45/EC) and CLP Regulation (EC) No 1272/2008 regulations |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------|

## Stae

|                                                                                      |                                                                                                                                                                                                                                                                                                      |                                                        |
|--------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| DPD classification <sup>[1]</sup>                                                    | R11                                                                                                                                                                                                                                                                                                  | Highly flammable.                                      |
|                                                                                      | R36/37/38                                                                                                                                                                                                                                                                                            | Irritating to eyes, respiratory system and skin.       |
|                                                                                      | R43                                                                                                                                                                                                                                                                                                  | May cause SENSITISATION by skin contact.               |
|                                                                                      | R66                                                                                                                                                                                                                                                                                                  | Repeated exposure may cause skin dryness and cracking. |
|                                                                                      | R67                                                                                                                                                                                                                                                                                                  | Vapours may cause drowsiness and dizziness.            |
| <b>Legend:</b>                                                                       | 1. Classification by vendor; 2. Classification drawn from EC Directive 67/548/EEC - Annex I ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI                                                                                                                                         |                                                        |
| <b>Classification according to regulation (EC) No 1272/2008 [CLP] <sup>[1]</sup></b> | Flammable Liquid Category 2, Skin Corrosion/Irritation Category 2, Eye Irritation Category 2, Skin Sensitizer Category 1, Specific target organ toxicity - single exposure Category 3 (respiratory tract irritation), Specific target organ toxicity - single exposure Category 3 (narcotic effects) |                                                        |
| <b>Legend:</b>                                                                       | 1. Classification by vendor; 2. Classification drawn from EC Directive 67/548/EEC - Annex I ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI                                                                                                                                         |                                                        |

## 2.2. Label elements

|                    |                                                                                                                                                                     |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CLP label elements |   |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|             |               |
|-------------|---------------|
| SIGNAL WORD | <b>DANGER</b> |
|-------------|---------------|

## Hazard statement(s)

|      |                                      |
|------|--------------------------------------|
| H225 | Highly flammable liquid and vapour.  |
| H315 | Causes skin irritation.              |
| H319 | Causes serious eye irritation.       |
| H317 | May cause an allergic skin reaction. |
| H335 | May cause respiratory irritation.    |
| H336 | May cause drowsiness or dizziness.   |

## Supplementary statement(s)

|        |                                                       |
|--------|-------------------------------------------------------|
| EUH066 | Repeated exposure may cause skin dryness or cracking. |
|--------|-------------------------------------------------------|

## Precautionary statement(s) Prevention

|      |                                                                                   |
|------|-----------------------------------------------------------------------------------|
| P210 | Keep away from heat/sparks/open flames/hot surfaces. No smoking.                  |
| P271 | Use only outdoors or in a well-ventilated area.                                   |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection.        |
| P240 | Ground/bond container and receiving equipment.                                    |
| P241 | Use explosion-proof electrical/ventilating/lighting/intrinsically safe equipment. |
| P242 | Use only non-sparking tools.                                                      |
| P243 | Take precautionary measures against static discharge.                             |
| P261 | Avoid breathing mist/vapours/spray.                                               |
| P272 | Contaminated work clothing should not be allowed out of the workplace.            |

## Precautionary statement(s) Response

|                |                                                                                                                                  |
|----------------|----------------------------------------------------------------------------------------------------------------------------------|
| P370+P378      | In case of fire: Use alcohol resistant foam or normal protein foam to extinguish.                                                |
| P302+P352      | IF ON SKIN: Wash with plenty of water and soap.                                                                                  |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P312           | Call a POISON CENTER/doctor/physician/first aider/if you feel unwell.                                                            |
| P333+P313      | If skin irritation or rash occurs: Get medical advice/attention.                                                                 |
| P337+P313      | If eye irritation persists: Get medical advice/attention.                                                                        |
| P362+P364      | Take off contaminated clothing and wash it before reuse.                                                                         |
| P303+P361+P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.                              |
| P304+P340      | IF INHALED: Remove person to fresh air and keep comfortable for breathing.                                                       |

## Precautionary statement(s) Storage

|           |                                                                  |
|-----------|------------------------------------------------------------------|
| P403+P235 | Store in a well-ventilated place. Keep cool.                     |
| P405      | Store locked up.                                                 |
| P403+P233 | Store in a well-ventilated place. Keep container tightly closed. |

## Precautionary statement(s) Disposal

|      |                                                                     |
|------|---------------------------------------------------------------------|
| P501 | Dispose of contents/container in accordance with local regulations. |
|------|---------------------------------------------------------------------|

## 2.3. Other hazards

Inhalation, skin contact and/or ingestion may produce health damage\*.

Continued...

Cumulative effects may result following exposure\*.

HARMFUL: may cause lung damage if swallowed

RECh - Art.57-59: The mixture does not contain Substances of Very High Concern (SVHC) at the SDS print date.

## SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

### 3.1.Substances

See 'Composition on ingredients' in Section 3.2

### 3.2.Mixtures

| 1.CAS No<br>2.EC No<br>3.Index No<br>4.REACH No                                                 | %[weight] | Name            | Classification according to directive 67/548/EEC [DSD] | Classification according to regulation (EC) No 1272/2008 [CLP]                                                                                                                  |
|-------------------------------------------------------------------------------------------------|-----------|-----------------|--------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.67-64-1<br>2.200-662-2<br>3.606-001-00-8<br>4.01-2119498062-37-XXXX,<br>01-2119471330-49-XXXX | 50-55     | acetone         | R11, R36, R66, R67 <sup>[2]</sup>                      | Flammable Liquid Category 2, Eye Irritation Category 2, Specific target organ toxicity - single exposure Category 3 (narcotic effects); H225, H319, H336, EUH066 <sup>[3]</sup> |
| 1.Not Available<br>2.Not Available<br>3.Not Available<br>4.Not Available                        | 20-40     | acrylic monomer | Not Applicable                                         | Not Applicable                                                                                                                                                                  |

**Legend:**

1. Classification by vendor; 2. Classification drawn from EC Directive 67/548/EEC - Annex I ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI  
4. Classification drawn from C&L

## SECTION 4 FIRST AID MEASURES

### 4.1. Description of first aid measures

|              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| General      | <p>If skin contact occurs:</p> <ul style="list-style-type: none"> <li>▶ Immediately remove all contaminated clothing, including footwear.</li> <li>▶ Flush skin and hair with running water (and soap if available).</li> <li>▶ Seek medical attention in event of irritation.</li> </ul> <p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> <li>▶ Immediately hold eyelids apart and flush the eye continuously with running water.</li> <li>▶ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.</li> <li>▶ Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.</li> <li>▶ Transport to hospital or doctor without delay.</li> <li>▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> <li>▶ If fumes or combustion products are inhaled remove from contaminated area.</li> <li>▶ Lay patient down. Keep warm and rested.</li> <li>▶ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.</li> <li>▶ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.</li> <li>▶ Transport to hospital, or doctor, without delay.</li> </ul> <p>Seek medical attention.</p> |
| Eye Contact  | <p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> <li>▶ Immediately hold eyelids apart and flush the eye continuously with running water.</li> <li>▶ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.</li> <li>▶ Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.</li> <li>▶ Transport to hospital or doctor without delay.</li> <li>▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Skin Contact | <p>If skin contact occurs:</p> <ul style="list-style-type: none"> <li>▶ Immediately remove all contaminated clothing, including footwear.</li> <li>▶ Flush skin and hair with running water (and soap if available).</li> <li>▶ Seek medical attention in event of irritation.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Inhalation   | <ul style="list-style-type: none"> <li>▶ If fumes or combustion products are inhaled remove from contaminated area.</li> <li>▶ Lay patient down. Keep warm and rested.</li> <li>▶ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.</li> <li>▶ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.</li> <li>▶ Transport to hospital, or doctor, without delay.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Ingestion    | <p>Seek medical attention.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

### 4.2 Most important symptoms and effects, both acute and delayed

See Section 11

### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

## SECTION 5 FIREFIGHTING MEASURES

### 5.1. Extinguishing media

Continued...

- ▶ Alcohol stable foam.
- ▶ Dry chemical powder.
- ▶ BCF (where regulations permit).
- ▶ Carbon dioxide.
- ▶ Water spray or fog - Large fires only.

## 5.2. Special hazards arising from the substrate or mixture

|                      |             |
|----------------------|-------------|
| Fire Incompatibility | None known. |
|----------------------|-------------|

## 5.3. Advice for firefighters

|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Fire Fighting         | <ul style="list-style-type: none"> <li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▶ May be violently or explosively reactive.</li> <li>▶ Wear breathing apparatus plus protective gloves in the event of a fire.</li> <li>▶ Prevent, by any means available, spillage from entering drains or water course.</li> <li>▶ Consider evacuation (or protect in place).</li> <li>▶ Fight fire from a safe distance, with adequate cover.</li> <li>▶ If safe, switch off electrical equipment until vapour fire hazard removed.</li> <li>▶ Use water delivered as a fine spray to control the fire and cool adjacent area.</li> <li>▶ Avoid spraying water onto liquid pools.</li> <li>▶ <b>Do not approach containers suspected to be hot.</b></li> <li>▶ Cool fire exposed containers with water spray from a protected location.</li> <li>▶ If safe to do so, remove containers from path of fire.</li> </ul> |
| Fire/Explosion Hazard | <ul style="list-style-type: none"> <li>▶ Liquid and vapour are highly flammable.</li> <li>▶ Severe fire hazard when exposed to heat, flame and/or oxidisers.</li> <li>▶ Vapour may travel a considerable distance to source of ignition.</li> <li>▶ Heating may cause expansion or decomposition leading to violent rupture of containers.</li> <li>▶ On combustion, may emit toxic fumes of carbon monoxide (CO).</li> </ul> <p>Combustion products include; carbon dioxide (CO<sub>2</sub>) other pyrolysis products typical of burning organic material</p>                                                                                                                                                                                                                                                                                                                                                                            |

## SECTION 6 ACCIDENTAL RELEASE MEASURES

### 6.1. Personal precautions, protective equipment and emergency procedures

See section 8

### 6.2. Environmental precautions

See section 12

### 6.3. Methods and material for containment and cleaning up

|              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Minor Spills | <ul style="list-style-type: none"> <li>▶ Remove all ignition sources.</li> <li>▶ Clean up all spills immediately.</li> <li>▶ Avoid breathing vapours and contact with skin and eyes.</li> <li>▶ Control personal contact with the substance, by using protective equipment.</li> <li>▶ Contain and absorb small quantities with vermiculite or other absorbent material.</li> <li>▶ Wipe up.</li> <li>▶ Collect residues in a flammable waste container.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Major Spills | <ul style="list-style-type: none"> <li>▶ Clear area of personnel and move upwind.</li> <li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▶ May be violently or explosively reactive.</li> <li>▶ Wear breathing apparatus plus protective gloves.</li> <li>▶ Prevent, by any means available, spillage from entering drains or water course.</li> <li>▶ Consider evacuation (or protect in place).</li> <li>▶ No smoking, naked lights or ignition sources.</li> <li>▶ Increase ventilation.</li> <li>▶ Stop leak if safe to do so.</li> <li>▶ Water spray or fog may be used to disperse /absorb vapour.</li> <li>▶ Contain spill with sand, earth or vermiculite.</li> <li>▶ Use only spark-free shovels and explosion proof equipment.</li> <li>▶ Collect recoverable product into labelled containers for recycling.</li> <li>▶ Absorb remaining product with sand, earth or vermiculite.</li> <li>▶ Collect solid residues and seal in labelled drums for disposal.</li> <li>▶ Wash area and prevent runoff into drains.</li> <li>▶ If contamination of drains or waterways occurs, advise emergency services.</li> </ul> |

### 6.4. Reference to other sections

Personal Protective Equipment advice is contained in Section 8 of the SDS.

## SECTION 7 HANDLING AND STORAGE

### 7.1. Precautions for safe handling

|               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Safe handling | <ul style="list-style-type: none"> <li>▶ Avoid all personal contact, including inhalation.</li> <li>▶ Wear protective clothing when risk of exposure occurs.</li> <li>▶ Use in a well-ventilated area.</li> <li>▶ Prevent concentration in hollows and sumps.</li> <li>▶ <b>DO NOT enter confined spaces until atmosphere has been checked.</b></li> <li>▶ Avoid smoking, naked lights, heat or ignition sources.</li> <li>▶ When handling, <b>DO NOT eat, drink or smoke.</b></li> <li>▶ Vapour may ignite on pumping or pouring due to static electricity.</li> <li>▶ <b>DO NOT use plastic buckets.</b></li> <li>▶ Earth and secure metal containers when dispensing or pouring product.</li> </ul> |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

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|                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                      | <ul style="list-style-type: none"> <li>▶ Use spark-free tools when handling.</li> <li>▶ Avoid contact with incompatible materials.</li> <li>▶ Keep containers securely sealed.</li> <li>▶ Avoid physical damage to containers.</li> <li>▶ Always wash hands with soap and water after handling.</li> <li>▶ Work clothes should be laundered separately.</li> <li>▶ Use good occupational work practice.</li> <li>▶ Observe manufacturer's storage and handling recommendations contained within this SDS.</li> <li>▶ Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions.</li> </ul> |
| <b>Fire and explosion protection</b> | See section 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Other information</b>             | Store in a dry and well ventilated-area, away from heat and sunlight.<br>Store between 10 and 25 deg. C.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

**7.2. Conditions for safe storage, including any incompatibilities**

|                                |                                                                                                                                                                            |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Suitable container</b>      | ▶ <b>DO NOT repack.</b> Use containers supplied by manufacturer only.                                                                                                      |
| <b>Storage incompatibility</b> | <ul style="list-style-type: none"> <li>▶ Avoid storage with reducing agents.</li> <li>▶ Avoid strong acids, acid chlorides, acid anhydrides and chloroformates.</li> </ul> |

**7.3. Specific end use(s)**

See section 1.2

**SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION****8.1. Control parameters****DERIVED NO EFFECT LEVEL (DNEL)**

Not Available

**PREDICTED NO EFFECT LEVEL (PNEC)**

Not Available

**OCCUPATIONAL EXPOSURE LIMITS (OEL)****INGREDIENT DATA**

| Source                                                                                             | Ingredient | Material name | TWA                   | STEL                  | Peak          | Notes         |
|----------------------------------------------------------------------------------------------------|------------|---------------|-----------------------|-----------------------|---------------|---------------|
| UK Workplace Exposure Limits (WELs)                                                                | acetone    | Acetone       | 1210 mg/m3 / 500 ppm  | 3620 mg/m3 / 1500 ppm | Not Available | Not Available |
| European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (English) | acetone    | Acetone       | 1 210 mg/m3 / 500 ppm | Not Available         | Not Available | Not Available |
| EU Consolidated List of Indicative Occupational Exposure Limit Values (IOELVs)                     | acetone    | Acetone       | 1210 mg/m3 / 500 ppm  | Not Available         | Not Available | Not Available |

**EMERGENCY LIMITS**

| Ingredient | Material name | TEEL-1        | TEEL-2        | TEEL-3        |
|------------|---------------|---------------|---------------|---------------|
| acetone    | Acetone       | Not Available | Not Available | Not Available |

  

| Ingredient      | Original IDLH | Revised IDLH    |
|-----------------|---------------|-----------------|
| acetone         | 20,000 ppm    | 2,500 [LEL] ppm |
| acrylic monomer | Not Available | Not Available   |

**MATERIAL DATA****8.2. Exposure controls**

| <b>8.2.1. Appropriate engineering controls</b>                                                                                                                                                                      | <p>Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.</p> <p>The basic types of engineering controls are:</p> <p>Process controls which involve changing the way a job activity or process is done to reduce the risk.</p> <p>Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use.</p> <p>Employers may need to use multiple types of controls to prevent employee overexposure.</p> <p>For flammable liquids and flammable gases, local exhaust ventilation or a process enclosure ventilation system may be required. Ventilation equipment should be explosion-resistant.</p> <p>Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.</p> |                      |            |                                                                          |                                 |                                                                                                                                                                                                                     |                               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|------------|--------------------------------------------------------------------------|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
|                                                                                                                                                                                                                     | <table> <tr> <th>Type of Contaminant:</th><th>Air Speed:</th></tr> <tr> <td>solvent, vapours, degreasing etc., evaporating from tank (in still air).</td><td>0.25-0.5 m/s<br/>(50-100 f/min.)</td></tr> <tr> <td>aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)</td><td>0.5-1 m/s<br/>(100-200 f/min.)</td></tr> </table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Type of Contaminant: | Air Speed: | solvent, vapours, degreasing etc., evaporating from tank (in still air). | 0.25-0.5 m/s<br>(50-100 f/min.) | aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation) | 0.5-1 m/s<br>(100-200 f/min.) |
| Type of Contaminant:                                                                                                                                                                                                | Air Speed:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                      |            |                                                                          |                                 |                                                                                                                                                                                                                     |                               |
| solvent, vapours, degreasing etc., evaporating from tank (in still air).                                                                                                                                            | 0.25-0.5 m/s<br>(50-100 f/min.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                      |            |                                                                          |                                 |                                                                                                                                                                                                                     |                               |
| aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation) | 0.5-1 m/s<br>(100-200 f/min.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |            |                                                                          |                                 |                                                                                                                                                                                                                     |                               |

Continued...

|                                                            | <p>direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)</p> <p>1-2.5 m/s (200-500 f/min.)</p> <p>Within each range the appropriate value depends on:</p> <table> <tr> <th>Lower end of the range</th><th>Upper end of the range</th></tr> <tr> <td>1: Room air currents minimal or favourable to capture</td><td>1: Disturbing room air currents</td></tr> <tr> <td>2: Contaminants of low toxicity or of nuisance value only.</td><td>2: Contaminants of high toxicity</td></tr> <tr> <td>3: Intermittent, low production.</td><td>3: High production, heavy use</td></tr> <tr> <td>4: Large hood or large air mass in motion</td><td>4: Small hood-local control only</td></tr> </table> <p>Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min.) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.</p> | Lower end of the range | Upper end of the range | 1: Room air currents minimal or favourable to capture | 1: Disturbing room air currents | 2: Contaminants of low toxicity or of nuisance value only. | 2: Contaminants of high toxicity | 3: Intermittent, low production. | 3: High production, heavy use | 4: Large hood or large air mass in motion | 4: Small hood-local control only |
|------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|------------------------|-------------------------------------------------------|---------------------------------|------------------------------------------------------------|----------------------------------|----------------------------------|-------------------------------|-------------------------------------------|----------------------------------|
| Lower end of the range                                     | Upper end of the range                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                        |                        |                                                       |                                 |                                                            |                                  |                                  |                               |                                           |                                  |
| 1: Room air currents minimal or favourable to capture      | 1: Disturbing room air currents                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                        |                        |                                                       |                                 |                                                            |                                  |                                  |                               |                                           |                                  |
| 2: Contaminants of low toxicity or of nuisance value only. | 2: Contaminants of high toxicity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                        |                        |                                                       |                                 |                                                            |                                  |                                  |                               |                                           |                                  |
| 3: Intermittent, low production.                           | 3: High production, heavy use                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                        |                        |                                                       |                                 |                                                            |                                  |                                  |                               |                                           |                                  |
| 4: Large hood or large air mass in motion                  | 4: Small hood-local control only                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                        |                        |                                                       |                                 |                                                            |                                  |                                  |                               |                                           |                                  |
| 8.2.2. Personal protection                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                        |                        |                                                       |                                 |                                                            |                                  |                                  |                               |                                           |                                  |
| Eye and face protection                                    | <ul style="list-style-type: none"> <li>▶ Safety glasses with side shields.</li> <li>▶ Chemical goggles.</li> <li>▶ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent]</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                        |                        |                                                       |                                 |                                                            |                                  |                                  |                               |                                           |                                  |
| Skin protection                                            | See Hand protection below                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                        |                        |                                                       |                                 |                                                            |                                  |                                  |                               |                                           |                                  |
| Hands/feet protection                                      | <ul style="list-style-type: none"> <li>▶ Wear chemical protective gloves, e.g. PVC.</li> <li>▶ Wear safety footwear or safety gumboots, e.g. Rubber</li> <li>▶ Rubber Gloves</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                        |                        |                                                       |                                 |                                                            |                                  |                                  |                               |                                           |                                  |
| Body protection                                            | See Other protection below                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                        |                        |                                                       |                                 |                                                            |                                  |                                  |                               |                                           |                                  |
| Other protection                                           | <ul style="list-style-type: none"> <li>▶ Overalls.</li> <li>▶ PVC Apron.</li> <li>▶ PVC protective suit may be required if exposure severe.</li> <li>▶ Eyewash unit.</li> <li>▶ Ensure there is ready access to a safety shower.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                        |                        |                                                       |                                 |                                                            |                                  |                                  |                               |                                           |                                  |
| Thermal hazards                                            | Not Available                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                        |                        |                                                       |                                 |                                                            |                                  |                                  |                               |                                           |                                  |

### Respiratory protection

Type AX Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required.

Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

| Required Minimum Protection Factor | Half-Face Respirator | Full-Face Respirator | Powered Air Respirator |
|------------------------------------|----------------------|----------------------|------------------------|
| up to 5 x ES                       | Air-line*            | AX-2                 | AX-PAPR-2 ^            |
| up to 10 x ES                      | -                    | AX-3                 | -                      |
| 10+ x ES                           | -                    | Air-line**           | -                      |

\* - Continuous Flow; \*\* - Continuous-flow or positive pressure demand

^ - Full-face

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO<sub>2</sub>), G = Agricultural chemicals, K = Ammonia(NH<sub>3</sub>), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

### 8.2.3. Environmental exposure controls

See section 12

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

|                  |                                                                                     |                                         |               |
|------------------|-------------------------------------------------------------------------------------|-----------------------------------------|---------------|
| Appearance       | Clear, pale yellow slightly viscous liquid with ester like odour, mixes with water. |                                         |               |
| Physical state   | Liquid                                                                              | Relative density (Water = 1)            | 0.8-1.15      |
| Odour            | Not Available                                                                       | Partition coefficient n-octanol / water | Not Available |
| Odour threshold  | Not Available                                                                       | Auto-ignition temperature (°C)          | Not Available |
| pH (as supplied) | Not Available                                                                       | Decomposition temperature               | Not Available |

## Stae

|                                                     |                     |                                         |                |
|-----------------------------------------------------|---------------------|-----------------------------------------|----------------|
| <b>Melting point / freezing point (°C)</b>          | Not Available       | <b>Viscosity (cSt)</b>                  | Not Available  |
| <b>Initial boiling point and boiling range (°C)</b> | gels before boiling | <b>Molecular weight (g/mol)</b>         | Not Applicable |
| <b>Flash point (°C)</b>                             | *-20 (acetone)      | <b>Taste</b>                            | Not Available  |
| <b>Evaporation rate</b>                             | Not Available       | <b>Explosive properties</b>             | Not Available  |
| <b>Flammability</b>                                 | HIGHLY FLAMMABLE.   | <b>Oxidising properties</b>             | Not Available  |
| <b>Upper Explosive Limit (%)</b>                    | 13                  | <b>Surface Tension (dyn/cm or mN/m)</b> | Not Available  |
| <b>Lower Explosive Limit (%)</b>                    | 3                   | <b>Volatile Component (%vol)</b>        | Not Available  |
| <b>Vapour pressure (kPa)</b>                        | Not Available       | <b>Gas group</b>                        | Not Available  |
| <b>Solubility in water (g/L)</b>                    | Miscible            | <b>pH as a solution (1%)</b>            | Not Available  |
| <b>Vapour density (Air = 1)</b>                     | Not Available       | <b>VOC g/L</b>                          | Not Available  |

## 9.2. Other information

Not Available

## SECTION 10 STABILITY AND REACTIVITY

|                                                 |                                                                                                                                                                                                      |
|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>10.1.Reactivity</b>                          | See section 7.2                                                                                                                                                                                      |
| <b>10.2.Chemical stability</b>                  | <ul style="list-style-type: none"> <li>▶ Unstable in the presence of incompatible materials.</li> <li>▶ Product is considered stable.</li> <li>▶ Hazardous polymerisation will not occur.</li> </ul> |
| <b>10.3. Possibility of hazardous reactions</b> | See section 7.2                                                                                                                                                                                      |
| <b>10.4. Conditions to avoid</b>                | See section 7.2                                                                                                                                                                                      |
| <b>10.5. Incompatible materials</b>             | See section 7.2                                                                                                                                                                                      |
| <b>10.6. Hazardous decomposition products</b>   | See section 5.3                                                                                                                                                                                      |

## SECTION 11 TOXICOLOGICAL INFORMATION

## 11.1. Information on toxicological effects

|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Inhaled</b>      | Evidence shows, or practical experience predicts, that the material produces irritation of the respiratory system, in a substantial number of individuals, following inhalation. In contrast to most organs, the lung is able to respond to a chemical insult by first removing or neutralising the irritant and then repairing the damage. The repair process, which initially evolved to protect mammalian lungs from foreign matter and antigens, may however, produce further lung damage resulting in the impairment of gas exchange, the primary function of the lungs. Respiratory tract irritation often results in an inflammatory response involving the recruitment and activation of many cell types, mainly derived from the vascular system. Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by narcosis, reduced alertness, loss of reflexes, lack of coordination and vertigo.                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Ingestion</b>    | Accidental ingestion of the material may be damaging to the health of the individual.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Skin Contact</b> | <p>Repeated exposure may cause skin cracking, flaking or drying following normal handling and use.</p> <p>Open cuts, abraded or irritated skin should not be exposed to this material</p> <p>Entry into the blood-stream through, for example, cuts, abrasions, puncture wounds or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.</p> <p>Evidence exists, or practical experience predicts, that the material either produces inflammation of the skin in a substantial number of individuals following direct contact, and/or produces significant inflammation when applied to the healthy intact skin of animals, for up to four hours, such inflammation being present twenty-four hours or more after the end of the exposure period. Skin irritation may also be present after prolonged or repeated exposure; this may result in a form of contact dermatitis (nonallergic). The dermatitis is often characterised by skin redness (erythema) and swelling (oedema) which may progress to blistering (vesiculation), scaling and thickening of the epidermis. At the microscopic level there may be intercellular oedema of the spongy layer of the skin (spongiosis) and intracellular oedema of the epidermis.</p> |
| <b>Eye</b>          | Evidence exists, or practical experience predicts, that the material may cause severe eye irritation in a substantial number of individuals and/or may produce significant ocular lesions which are present twenty-four hours or more after instillation into the eye(s) of experimental animals. Eye contact may cause significant inflammation with pain. Corneal injury may occur; permanent impairment of vision may result unless treatment is prompt and adequate. Repeated or prolonged exposure to irritants may cause inflammation characterised by a temporary redness (similar to windburn) of the conjunctiva (conjunctivitis); temporary impairment of vision and/or other transient eye damage/ulceration may occur.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Chronic</b>      | <p>Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems.</p> <p>Practical experience shows that skin contact with the material is capable either of inducing a sensitisation reaction in a substantial number of individuals, and/or of producing a positive response in experimental animals.</p> <p>Prolonged or repeated skin contact may cause drying with cracking, irritation and possible dermatitis following.</p> <p>Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

|                |                                                      |                                    |
|----------------|------------------------------------------------------|------------------------------------|
| <b>Stae</b>    | <b>TOXICITY</b>                                      | <b>IRRITATION</b>                  |
|                | Not Available                                        | Not Available                      |
| <b>acetone</b> | <b>TOXICITY</b>                                      | <b>IRRITATION</b>                  |
|                | Dermal (rabbit) LD50: 20000 mg/kg <sup>[2]</sup>     | Eye (human): 500 ppm - irritant    |
|                | Inhalation (rat) LC50: 50.1 mg/L/8 hr <sup>[2]</sup> | Eye (rabbit): 20mg/24hr - moderate |
|                | Oral (rat) LD50: 5800 mg/kgE <sup>[2]</sup>          | Eye (rabbit): 3.95 mg - SEVERE     |
|                |                                                      | Skin (rabbit): 500 mg/24hr - mild  |

Continued...

## Stae

Skin (rabbit):395mg (open) - mild

**Legend:** 1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. \* Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances

**ACETONE**

The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling epidermis. Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis.

for acetone:

The acute toxicity of acetone is low. Acetone is not a skin irritant or sensitiser but is a defatting agent to the skin. Acetone is an eye irritant. The subchronic toxicity of acetone has been examined in mice and rats that were administered acetone in the drinking water and again in rats treated by oral gavage. Acetone-induced increases in relative kidney weight changes were observed in male and female rats used in the oral 13-week study. Acetone treatment caused increases in the relative liver weight in male and female rats that were not associated with histopathologic effects and the effects may have been associated with microsomal enzyme induction. Haematologic effects consistent with macrocytic anaemia were also noted in male rats along with hyperpigmentation in the spleen. The most notable findings in the mice were increased liver and decreased spleen weights. Overall, the no-observed-effect-levels in the drinking water study were 1% for male rats (900 mg/kg/d) and male mice (2258 mg/kg/d), 2% for female mice (5945 mg/kg/d), and 5% for female rats (3100 mg/kg/d). For developmental effects, a statistically significant reduction in foetal weight, and a slight, but statistically significant increase in the percent incidence of later resorptions were seen in mice at 15,665 mg/m3 and in rats at 26,100 mg/m3. The no-observable-effect level for developmental toxicity was determined to be 5220 mg/m3 for both rats and mice.

Teratogenic effects were not observed in rats and mice tested at 26,110 and 15,665 mg/m3, respectively. Lifetime dermal carcinogenicity studies in mice treated with up to 0.2 mL of acetone did not reveal any increase in organ tumor incidence relative to untreated control animals.

The scientific literature contains many different studies that have measured either the neurobehavioural performance or neurophysiological response of humans exposed to acetone. Effect levels ranging from about 600 to greater than 2375 mg/m3 have been reported. Neurobehavioral studies with acetone-exposed employees have recently shown that 8-hr exposures in excess of 2375 mg/m3 were not associated with any dose-related changes in response time, vigilance, or digit span scores. Clinical case studies, controlled human volunteer studies, animal research, and occupational field evaluations all indicate that the NOAEL for this effect is 2375 mg/m3 or greater.

|                                   |   |                          |   |
|-----------------------------------|---|--------------------------|---|
| Acute Toxicity                    | ☐ | Carcinogenicity          | ☐ |
| Skin Irritation/Corrosion         | ✓ | Reproductivity           | ☐ |
| Serious Eye Damage/Irritation     | ✓ | STOT - Single Exposure   | ✓ |
| Respiratory or Skin sensitisation | ✓ | STOT - Repeated Exposure | ☐ |
| Mutagenicity                      | ☐ | Aspiration Hazard        | ☐ |

**Legend:** ✗ – Data available but does not fill the criteria for classification  
 ✓ – Data required to make classification available  
 ☐ – Data Not Available to make classification

**SECTION 12 ECOLOGICAL INFORMATION****12.1. Toxicity**

| Ingredient | Endpoint | Test Duration (hr) | Species                       | Value      | Source |
|------------|----------|--------------------|-------------------------------|------------|--------|
| acetone    | EC50     | 384                | Crustacea                     | 97.013mg/L | 3      |
| acetone    | EC50     | 48                 | Crustacea                     | >100mg/L   | 4      |
| acetone    | EC50     | 96                 | Algae or other aquatic plants | 20.565mg/L | 4      |
| acetone    | LC50     | 96                 | Fish                          | >100mg/L   | 4      |
| acetone    | NOEC     | 96                 | Algae or other aquatic plants | 4.950mg/L  | 4      |

**Legend:**

Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data

**DO NOT** discharge into sewer or waterways.

**12.2. Persistence and degradability**

| Ingredient | Persistence: Water/Soil   | Persistence: Air                 |
|------------|---------------------------|----------------------------------|
| acetone    | LOW (Half-life = 14 days) | MEDIUM (Half-life = 116.25 days) |

**12.3. Bioaccumulative potential**

| Ingredient | Bioaccumulation  |
|------------|------------------|
| acetone    | LOW (BCF = 0.69) |

**12.4. Mobility in soil**

| Ingredient | Mobility           |
|------------|--------------------|
| acetone    | HIGH (KOC = 1.981) |

**12.5. Results of PBT and vPvB assessment**

|                         | P             | B             | T             |
|-------------------------|---------------|---------------|---------------|
| Relevant available data | Not Available | Not Available | Not Available |
| PBT Criteria fulfilled? | Not Available | Not Available | Not Available |

Continued...



**12.6. Other adverse effects**

No data available

**SECTION 13 DISPOSAL CONSIDERATIONS****13.1. Waste treatment methods**

|                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product / Packaging disposal</b> | <ul style="list-style-type: none"> <li>Containers may still present a chemical hazard/ danger when empty.</li> <li>Return to supplier for reuse/ recycling if possible.</li> </ul> <p>Otherwise:</p> <ul style="list-style-type: none"> <li>If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill.</li> <li>Where possible retain label warnings and SDS and observe all notices pertaining to the product.</li> <li><b>DO NOT allow wash water from cleaning or process equipment to enter drains.</b></li> <li>It may be necessary to collect all wash water for treatment before disposal.</li> <li>In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.</li> <li>Where in doubt contact the responsible authority.</li> </ul> <p>Consult State Land Waste Management Authority for disposal.<br/>Bury residue in an authorised landfill.</p> |
| <b>Waste treatment options</b>      | Not Available                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Sewage disposal options</b>      | Not Available                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

**SECTION 14 TRANSPORT INFORMATION****Labels Required**

|                         |                                                                                   |
|-------------------------|-----------------------------------------------------------------------------------|
|                         |  |
| <b>Marine Pollutant</b> | NO                                                                                |
| <b>HAZCHEM</b>          | •3YE                                                                              |

**Land transport (ADR)**

|                                           |                                                                                                                                                                                                                                                                                           |                                |    |                     |                |              |   |                    |                   |                  |     |
|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|----|---------------------|----------------|--------------|---|--------------------|-------------------|------------------|-----|
| <b>14.1.UN number</b>                     | 1993                                                                                                                                                                                                                                                                                      |                                |    |                     |                |              |   |                    |                   |                  |     |
| <b>14.2.Packing group</b>                 | II                                                                                                                                                                                                                                                                                        |                                |    |                     |                |              |   |                    |                   |                  |     |
| <b>14.3.UN proper shipping name</b>       | FLAMMABLE LIQUID, N.O.S. (contains acetone)                                                                                                                                                                                                                                               |                                |    |                     |                |              |   |                    |                   |                  |     |
| <b>14.4.Environmental hazard</b>          | Not Applicable                                                                                                                                                                                                                                                                            |                                |    |                     |                |              |   |                    |                   |                  |     |
| <b>14.5. Transport hazard class(es)</b>   | <table> <tr> <td>Class</td><td>3</td></tr> <tr> <td>Subrisk</td><td>Not Applicable</td></tr> </table>                                                                                                                                                                                     | Class                          | 3  | Subrisk             | Not Applicable |              |   |                    |                   |                  |     |
| Class                                     | 3                                                                                                                                                                                                                                                                                         |                                |    |                     |                |              |   |                    |                   |                  |     |
| Subrisk                                   | Not Applicable                                                                                                                                                                                                                                                                            |                                |    |                     |                |              |   |                    |                   |                  |     |
| <b>14.6. Special precautions for user</b> | <table> <tr> <td>Hazard identification (Kemler)</td><td>33</td></tr> <tr> <td>Classification code</td><td>F1</td></tr> <tr> <td>Hazard Label</td><td>3</td></tr> <tr> <td>Special provisions</td><td>274 601 640C 640D</td></tr> <tr> <td>Limited quantity</td><td>1 L</td></tr> </table> | Hazard identification (Kemler) | 33 | Classification code | F1             | Hazard Label | 3 | Special provisions | 274 601 640C 640D | Limited quantity | 1 L |
| Hazard identification (Kemler)            | 33                                                                                                                                                                                                                                                                                        |                                |    |                     |                |              |   |                    |                   |                  |     |
| Classification code                       | F1                                                                                                                                                                                                                                                                                        |                                |    |                     |                |              |   |                    |                   |                  |     |
| Hazard Label                              | 3                                                                                                                                                                                                                                                                                         |                                |    |                     |                |              |   |                    |                   |                  |     |
| Special provisions                        | 274 601 640C 640D                                                                                                                                                                                                                                                                         |                                |    |                     |                |              |   |                    |                   |                  |     |
| Limited quantity                          | 1 L                                                                                                                                                                                                                                                                                       |                                |    |                     |                |              |   |                    |                   |                  |     |

**Air transport (ICAO-IATA / DGR)**

|                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                    |    |                                 |                |                               |      |                                          |     |                                        |     |                                                           |      |                                                |     |
|-----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|----|---------------------------------|----------------|-------------------------------|------|------------------------------------------|-----|----------------------------------------|-----|-----------------------------------------------------------|------|------------------------------------------------|-----|
| <b>14.1. UN number</b>                                    | 1993                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                    |    |                                 |                |                               |      |                                          |     |                                        |     |                                                           |      |                                                |     |
| <b>14.2. Packing group</b>                                | II                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |    |                                 |                |                               |      |                                          |     |                                        |     |                                                           |      |                                                |     |
| <b>14.3. UN proper shipping name</b>                      | Flammable liquid, n.o.s. * (contains acetone)                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                    |    |                                 |                |                               |      |                                          |     |                                        |     |                                                           |      |                                                |     |
| <b>14.4. Environmental hazard</b>                         | Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                    |    |                                 |                |                               |      |                                          |     |                                        |     |                                                           |      |                                                |     |
| <b>14.5. Transport hazard class(es)</b>                   | <table> <tr> <td>ICAO/IATA Class</td><td>3</td></tr> <tr> <td>ICAO / IATA Subrisk</td><td>Not Applicable</td></tr> <tr> <td>ERG Code</td><td>3H</td></tr> </table>                                                                                                                                                                                                                                                                                                                                                   | ICAO/IATA Class    | 3  | ICAO / IATA Subrisk             | Not Applicable | ERG Code                      | 3H   |                                          |     |                                        |     |                                                           |      |                                                |     |
| ICAO/IATA Class                                           | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                    |    |                                 |                |                               |      |                                          |     |                                        |     |                                                           |      |                                                |     |
| ICAO / IATA Subrisk                                       | Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                    |    |                                 |                |                               |      |                                          |     |                                        |     |                                                           |      |                                                |     |
| ERG Code                                                  | 3H                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |    |                                 |                |                               |      |                                          |     |                                        |     |                                                           |      |                                                |     |
| <b>14.6. Special precautions for user</b>                 | <table> <tr> <td>Special provisions</td><td>A3</td></tr> <tr> <td>Cargo Only Packing Instructions</td><td>364</td></tr> <tr> <td>Cargo Only Maximum Qty / Pack</td><td>60 L</td></tr> <tr> <td>Passenger and Cargo Packing Instructions</td><td>353</td></tr> <tr> <td>Passenger and Cargo Maximum Qty / Pack</td><td>5 L</td></tr> <tr> <td>Passenger and Cargo Limited Quantity Packing Instructions</td><td>Y341</td></tr> <tr> <td>Passenger and Cargo Limited Maximum Qty / Pack</td><td>1 L</td></tr> </table> | Special provisions | A3 | Cargo Only Packing Instructions | 364            | Cargo Only Maximum Qty / Pack | 60 L | Passenger and Cargo Packing Instructions | 353 | Passenger and Cargo Maximum Qty / Pack | 5 L | Passenger and Cargo Limited Quantity Packing Instructions | Y341 | Passenger and Cargo Limited Maximum Qty / Pack | 1 L |
| Special provisions                                        | A3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |    |                                 |                |                               |      |                                          |     |                                        |     |                                                           |      |                                                |     |
| Cargo Only Packing Instructions                           | 364                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                    |    |                                 |                |                               |      |                                          |     |                                        |     |                                                           |      |                                                |     |
| Cargo Only Maximum Qty / Pack                             | 60 L                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                    |    |                                 |                |                               |      |                                          |     |                                        |     |                                                           |      |                                                |     |
| Passenger and Cargo Packing Instructions                  | 353                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                    |    |                                 |                |                               |      |                                          |     |                                        |     |                                                           |      |                                                |     |
| Passenger and Cargo Maximum Qty / Pack                    | 5 L                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                    |    |                                 |                |                               |      |                                          |     |                                        |     |                                                           |      |                                                |     |
| Passenger and Cargo Limited Quantity Packing Instructions | Y341                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                    |    |                                 |                |                               |      |                                          |     |                                        |     |                                                           |      |                                                |     |
| Passenger and Cargo Limited Maximum Qty / Pack            | 1 L                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                    |    |                                 |                |                               |      |                                          |     |                                        |     |                                                           |      |                                                |     |

## Sea transport (IMDG-Code / GGVSee)

|                                    |                                                                         |
|------------------------------------|-------------------------------------------------------------------------|
| 14.1. UN number                    | 1993                                                                    |
| 14.2. Packing group                | II                                                                      |
| 14.3. UN proper shipping name      | FLAMMABLE LIQUID, N.O.S. (contains acetone)                             |
| 14.4. Environmental hazard         | Not Applicable                                                          |
| 14.5. Transport hazard class(es)   | IMDG Class 3<br>IMDG Subrisk Not Applicable                             |
| 14.6. Special precautions for user | EMS Number F-E, S-E<br>Special provisions 274<br>Limited Quantities 1 L |

## Inland waterways transport (ADN)

|                                    |                                                                                                                                                  |
|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| 14.1. UN number                    | 1993                                                                                                                                             |
| 14.2. Packing group                | II                                                                                                                                               |
| 14.3. UN proper shipping name      | FLAMMABLE LIQUID, N.O.S. (contains acetone)                                                                                                      |
| 14.4. Environmental hazard         | Not Applicable                                                                                                                                   |
| 14.5. Transport hazard class(es)   | 3 Not Applicable                                                                                                                                 |
| 14.6. Special precautions for user | Classification code F1<br>Special provisions 274; 601; 640C; 640D<br>Limited quantity 1 L<br>Equipment required PP, EX, A<br>Fire cones number 1 |

## Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

If packed as Chemical kits the following classification may be considered if all ICAO/IATA transport requirements are met: Chemical Kit UN3316 - Class 9.

## SECTION 15 REGULATORY INFORMATION

## 15.1. Safety, health and environmental regulations / legislation specific for the substance or mixture

## ACETONE(67-64-1) IS FOUND ON THE FOLLOWING REGULATORY LISTS

EU Consolidated List of Indicative Occupational Exposure Limit Values (IOELVs)

EU REACH Regulation (EC) No 1907/2006 - Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

European Customs Inventory of Chemical Substances ECICS (English)

European Trade Union Confederation (ETUC) Priority List for REACH Authorisation

European Union - European Inventory of Existing Commercial Chemical Substances (EINECS) (English)

European Union (EU) Annex I to Directive 67/548/EEC on Classification and Labelling of Dangerous Substances - updated by ATP: 31

European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Bulgarian)

European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Czech)

European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Danish)

European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Dutch)

European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (English)

European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Estonian)

European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Finnish)

European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (French)

European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (German)

European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Greek)

European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Hungarian)

European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Italian)

European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Latvian)

European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Lithuanian)

European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Maltese)

European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Polish)

European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Portuguese)

European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Romanian)

European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Slovak)

European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Slovenian)

European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Spanish)

European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Swedish)

European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI

UK Workplace Exposure Limits (WELs)

This safety data sheet is in compliance with the following EU legislation and its adaptations - as far as applicable - : 67/548/EEC, 1999/45/EC, 98/24/EC, 92/85/EC, 94/33/EC, 91/689/EEC, 1999/13/EC, Commission Regulation (EU) 2015/830, Regulation (EC) No 1272/2008 and their amendments as well as the following British legislation: - The Control of Substances Hazardous to Health Regulations (COSHH) 2002 - COSHH Essentials - The Management of Health and Safety at Work Regulations 1999

## 15.2. Chemical safety assessment

For further information please look at the Chemical Safety Assessment and Exposure Scenarios prepared by your Supply Chain if available.

### ECHA SUMMARY

| Ingredient                    | CAS number                                                                         | Index No                       | ECHA Dossier                                                     |
|-------------------------------|------------------------------------------------------------------------------------|--------------------------------|------------------------------------------------------------------|
| acetone                       | 67-64-1                                                                            | 606-001-00-8                   | 01-2119498062-37-XXXX, 01-2119471330-49-XXXX                     |
| Harmonisation (C&L Inventory) | Hazard Class and Category Code(s)                                                  | Pictograms Signal Word Code(s) | Hazard Statement Code(s)                                         |
| 1                             | Flam. Liq. 2, Eye Irrit. 2, STOT SE 3                                              | GHS07, GHS02, Dgr              | H225, H319, H336                                                 |
| 2                             | Flam. Liq. 2, Eye Irrit. 2, STOT SE 3, Flam. Liq. 3, Not Classified, Eye Irrit. 2A | Dgr, GHS01, Wng, GHS08, GHS06  | H225, H319, H336, H371, H228, H315, H335, H312, H332, H340, H302 |
| 1                             | Flam. Liq. 2, Eye Irrit. 2, STOT SE 3                                              | GHS07, GHS02, Dgr              | H225, H319, H336                                                 |
| 2                             | Flam. Liq. 2, Eye Irrit. 2, STOT SE 3                                              | GHS07, GHS02, Dgr              | H225, H319, H336                                                 |

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

| National Inventory            | Status                                                                                                                                                                                   |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Australia - AICS              | Y                                                                                                                                                                                        |
| Canada - DSL                  | Y                                                                                                                                                                                        |
| Canada - NDSL                 | N (acetone)                                                                                                                                                                              |
| China - IECSC                 | Y                                                                                                                                                                                        |
| Europe - EINEC / ELINCS / NLP | Y                                                                                                                                                                                        |
| Japan - ENCS                  | Y                                                                                                                                                                                        |
| Korea - KECI                  | Y                                                                                                                                                                                        |
| New Zealand - NZIoC           | Y                                                                                                                                                                                        |
| Philippines - PICCS           | Y                                                                                                                                                                                        |
| USA - TSCA                    | Y                                                                                                                                                                                        |
| <b>Legend:</b>                | Y = All ingredients are on the inventory<br>N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets) |

## SECTION 16 OTHER INFORMATION

### Full text Risk and Hazard codes

|             |                               |
|-------------|-------------------------------|
| <b>H228</b> | Flammable solid.              |
| <b>H302</b> | Harmful if swallowed.         |
| <b>H312</b> | Harmful in contact with skin. |
| <b>H332</b> | Harmful if inhaled.           |
| <b>H340</b> | May cause genetic defects.    |
| <b>H371</b> | May cause damage to organs.   |
| <b>R36</b>  | Irritating to eyes.           |

### Other information

### DSD / DPD label elements



Relevant risk statements are found in section 2.1

| Indication(s) of danger | Xi |
|-------------------------|----|
|-------------------------|----|

### SAFETY ADVICE

|            |                                                                                                            |
|------------|------------------------------------------------------------------------------------------------------------|
| <b>S02</b> | Keep out of reach of children.                                                                             |
| <b>S09</b> | Keep container in a well ventilated place.                                                                 |
| <b>S16</b> | Keep away from sources of ignition. No smoking.                                                            |
| <b>S23</b> | Do not breathe gas/fumes/vapour/spray.                                                                     |
| <b>S24</b> | Avoid contact with skin.                                                                                   |
| <b>S26</b> | In case of contact with eyes, rinse with plenty of water and contact Doctor or Poisons Information Centre. |
| <b>S29</b> | Do not empty into drains.                                                                                  |
| <b>S33</b> | Take precautionary measures against static discharges.                                                     |
| <b>S35</b> | This material and its container must be disposed of in a safe way.                                         |
| <b>S37</b> | Wear suitable gloves.                                                                                      |

## Stae

|            |                                                                                            |
|------------|--------------------------------------------------------------------------------------------|
| <b>S39</b> | Wear eye/face protection.                                                                  |
| <b>S40</b> | To clean the floor and all objects contaminated by this material, use water.               |
| <b>S41</b> | In case of fire and/or explosion, DO NOT BREATHE FUMES.                                    |
| <b>S43</b> | In case of fire use the extinguishing media detailed in section 5 of this SDS.             |
| <b>S46</b> | If swallowed, seek medical advice immediately and show this container or label.            |
| <b>S51</b> | Use only in well ventilated areas.                                                         |
| <b>S56</b> | Dispose of this material and its container at hazardous or special waste collection point. |
| <b>S64</b> | If swallowed, rinse mouth with water (only if the person is conscious).                    |

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by SDI Limited using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

For detailed advice on Personal Protective Equipment, refer to the following EU CEN Standards:

EN 166 Personal eye-protection

EN 340 Protective clothing

EN 374 Protective gloves against chemicals and micro-organisms

EN 13832 Footwear protecting against chemicals

EN 133 Respiratory protective devices

### Definitions and abbreviations

PC – TWA: Permissible Concentration-Time Weighted Average

PC – STEL: Permissible Concentration-Short Term Exposure Limit

IARC: International Agency for Research on Cancer

ACGIH: American Conference of Governmental Industrial Hygienists

STEL: Short Term Exposure Limit

TEEL: Temporary Emergency Exposure Limit,

IDLH: Immediately Dangerous to Life or Health Concentrations

OSF: Odour Safety Factor

NOAEL :No Observed Adverse Effect Level

LOAEL: Lowest Observed Adverse Effect Level

TLV: Threshold Limit Value

LOD: Limit Of Detection

OTV: Odour Threshold Value

BCF: BioConcentration Factors

BEI: Biological Exposure Index

The information contained in the Safety Data Sheet is based on data considered to be accurate, however, no warranty is expressed or implied regarding the accuracy of the data or the results to be obtained from the use thereof.

### Other information:

Prepared by: SDI Limited

3-15 Brunsdon Street, Bayswater Victoria, 3153, Australia

Phone Number: +61 3 8727 7111

Department issuing SDS: Research and Development

Contact: Technical Director



## Super Etch, Super Etch LV and Acid Etch Gel/ Liquid

### SDI Limited

Version No: 4.1.1.1

Safety Data Sheet (Conforms to Regulations (EC) No 2015/830)

Issue Date: 18/03/2016

Print Date: 31/03/2016

Initial Date: Not Available

L.REACH.GBR.EN

## SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

### 1.1. Product Identifier

|                               |                                                     |
|-------------------------------|-----------------------------------------------------|
| Product name                  | Super Etch, Super Etch LV and Acid Etch Gel/ Liquid |
| Synonyms                      | Not Available                                       |
| Proper shipping name          | PHOSPHORIC ACID, SOLUTION                           |
| Other means of identification | Not Available                                       |

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

|                          |                                                        |
|--------------------------|--------------------------------------------------------|
| Relevant identified uses | For etching of tooth surfaces by dental professionals. |
| Uses advised against     | Not Applicable                                         |

### 1.3. Details of the supplier of the safety data sheet

| Registered company name | SDI Limited                                       | SDI Brazil Industria E Comercio Ltda                                   | SDI Germany GmbH                        |
|-------------------------|---------------------------------------------------|------------------------------------------------------------------------|-----------------------------------------|
| Address                 | 3-15 Brunston Street VIC Bayswater 3153 Australia | Rua Dr. Virgilio de Carvalho Pinto, 612 São Paulo CEP 05415-020 Brazil | Hansestrasse 85 Cologne D-51149 Germany |
| Telephone               | +61 3 8727 7111 (Business Hours)                  | +55 11 3092 7100                                                       | +49 0 2203 9255 0                       |
| Fax                     | +61 3 8727 7222                                   | +55 11 3092 7101                                                       | +49 0 2203 9255 200                     |
| Website                 | www.sdi.com.au                                    | www.sdi.com.au                                                         | www.sdi.com.au                          |
| Email                   | info@sdi.com.au                                   | brasil@sdi.com.au                                                      | germany@sdi.com.au                      |

|                         |                                                     |
|-------------------------|-----------------------------------------------------|
| Registered company name | SDI (North America) Inc.                            |
| Address                 | 1279 Hamilton Parkway IL Itasca 60143 United States |
| Telephone               | +1 630 361 9200 (Business hours)                    |
| Fax                     | Not Available                                       |
| Website                 | Not Available                                       |
| Email                   | USA.Canada@sdi.com.au                               |

### 1.4. Emergency telephone number

|                                   |                       |               |               |
|-----------------------------------|-----------------------|---------------|---------------|
| Association / Organisation        | SDI Limited           | Not Available | Not Available |
| Emergency telephone numbers       | +61 3 8727 7111       | Not Available | Not Available |
| Other emergency telephone numbers | ray.cahill@sdi.com.au | Not Available | Not Available |

|                                   |                 |
|-----------------------------------|-----------------|
| Association / Organisation        | Not Available   |
| Emergency telephone numbers       | +61 3 8727 7111 |
| Other emergency telephone numbers | Not Available   |

## SECTION 2 HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

Considered a dangerous mixture according to Directive 1999/45/EC, Reg. (EC) No 1272/2008 (if applicable) and their amendments.  
Classified as Dangerous Goods for transport purposes.

|                    |                                                                                                                                                |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| DSD classification | In case of mixtures, classification has been prepared by following DPD (Directive 1999/45/EC) and CLP Regulation (EC) No 1272/2008 regulations |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------|

## Super Etch, Super Etch LV and Acid Etch Gel/ Liquid

|                                                                               |                                                                                                                                                              |                                 |
|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| DPD classification <sup>[1]</sup>                                             | R34                                                                                                                                                          | Causes burns.                   |
|                                                                               | R41                                                                                                                                                          | Risk of serious damage to eyes. |
| Legend:                                                                       | 1. Classification by vendor; 2. Classification drawn from EC Directive 67/548/EEC - Annex I ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI |                                 |
| Classification according to regulation (EC) No 1272/2008 [CLP] <sup>[1]</sup> | Metal Corrosion Category 1, Skin Corrosion/Irritation Category 1B, Serious Eye Damage Category 1                                                             |                                 |
| Legend:                                                                       | 1. Classification by vendor; 2. Classification drawn from EC Directive 67/548/EEC - Annex I ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI |                                 |

## 2.2. Label elements

|                    |                                                                                   |
|--------------------|-----------------------------------------------------------------------------------|
| CLP label elements |  |
|--------------------|-----------------------------------------------------------------------------------|

|             |               |
|-------------|---------------|
| SIGNAL WORD | <b>DANGER</b> |
|-------------|---------------|

## Hazard statement(s)

|      |                                          |
|------|------------------------------------------|
| H290 | May be corrosive to metals.              |
| H314 | Causes severe skin burns and eye damage. |
| H318 | Causes serious eye damage.               |

## Supplementary statement(s)

Not Applicable

## Precautionary statement(s) Prevention

|      |                                                                            |
|------|----------------------------------------------------------------------------|
| P260 | Do not breathe dust/fume/gas/mist/vapours/spray.                           |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| P234 | Keep only in original container.                                           |

## Precautionary statement(s) Response

|                |                                                                                                                                  |
|----------------|----------------------------------------------------------------------------------------------------------------------------------|
| P301+P330+P331 | IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.                                                                               |
| P303+P361+P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.                              |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P310           | Immediately call a POISON CENTER/doctor/physician/first aider.                                                                   |
| P363           | Wash contaminated clothing before reuse.                                                                                         |
| P390           | Absorb spillage to prevent material damage.                                                                                      |
| P304+P340      | IF INHALED: Remove person to fresh air and keep comfortable for breathing.                                                       |

## Precautionary statement(s) Storage

|      |                  |
|------|------------------|
| P405 | Store locked up. |
|------|------------------|

## Precautionary statement(s) Disposal

|      |                                                                     |
|------|---------------------------------------------------------------------|
| P501 | Dispose of contents/container in accordance with local regulations. |
|------|---------------------------------------------------------------------|

## 2.3. Other hazards

Ingestion may produce health damage\*.

Cumulative effects may result following exposure\*.

REACH - Art.57-59: The mixture does not contain Substances of Very High Concern (SVHC) at the SDS print date.

## SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

## 3.1.Substances

See 'Composition on ingredients' in Section 3.2

## 3.2.Mixtures

| 1.CAS No<br>2.EC No<br>3.Index No<br>4.REACH No                         | %[weight]                                                                                                                                                                                        | Name            | Classification according to directive 67/548/EEC [DSD] | Classification according to regulation (EC) No 1272/2008 [CLP] |
|-------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|--------------------------------------------------------|----------------------------------------------------------------|
| 1.7664-38-2<br>2.231-633-2<br>3.015-011-00-6<br>4.01-2119485924-24-0001 | 37                                                                                                                                                                                               | phosphoric acid | R34 <sup>[2]</sup>                                     | Skin Corrosion/Irritation Category 1B; H314 <sup>[3]</sup>     |
| Legend:                                                                 | 1. Classification by vendor; 2. Classification drawn from EC Directive 67/548/EEC - Annex I ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI<br>4. Classification drawn from C&L |                 |                                                        |                                                                |

Continued...

## Super Etch, Super Etch LV and Acid Etch Gel/ Liquid

### SECTION 4 FIRST AID MEASURES

#### 4.1. Description of first aid measures

|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>General</b>      | <p>If skin or hair contact occurs:</p> <ul style="list-style-type: none"> <li>▶ Immediately flush body and clothes with large amounts of water, using safety shower if available.</li> <li>▶ Quickly remove all contaminated clothing, including footwear.</li> <li>▶ Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre.</li> <li>▶ Transport to hospital, or doctor.</li> </ul> <p>Seek medical attention.</p> <p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> <li>▶ Immediately hold eyelids apart and flush the eye continuously with running water.</li> <li>▶ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.</li> <li>▶ Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.</li> <li>▶ Transport to hospital or doctor without delay.</li> <li>▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> <li>▶ If fumes or combustion products are inhaled remove from contaminated area.</li> <li>▶ Lay patient down. Keep warm and rested.</li> <li>▶ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.</li> <li>▶ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.</li> <li>▶ Transport to hospital, or doctor.</li> <li>▶ <b>If swallowed do NOT induce vomiting.</b></li> <li>▶ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.</li> <li>▶ Observe the patient carefully.</li> <li>▶ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.</li> <li>▶ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.</li> <li>▶ Seek medical advice.</li> </ul> <p>Rinse mouth with water.</p> |
| <b>Eye Contact</b>  | <p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> <li>▶ Immediately hold eyelids apart and flush the eye continuously with running water.</li> <li>▶ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.</li> <li>▶ Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.</li> <li>▶ Transport to hospital or doctor without delay.</li> <li>▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Skin Contact</b> | <p>If skin or hair contact occurs:</p> <ul style="list-style-type: none"> <li>▶ Immediately flush body and clothes with large amounts of water, using safety shower if available.</li> <li>▶ Quickly remove all contaminated clothing, including footwear.</li> <li>▶ Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre.</li> <li>▶ Transport to hospital, or doctor.</li> </ul> <p>Seek medical attention.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Inhalation</b>   | <ul style="list-style-type: none"> <li>▶ If fumes or combustion products are inhaled remove from contaminated area.</li> <li>▶ Lay patient down. Keep warm and rested.</li> <li>▶ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.</li> <li>▶ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.</li> <li>▶ Transport to hospital, or doctor.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Ingestion</b>    | <ul style="list-style-type: none"> <li>▶ <b>If swallowed do NOT induce vomiting.</b></li> <li>▶ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.</li> <li>▶ Observe the patient carefully.</li> <li>▶ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.</li> <li>▶ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.</li> <li>▶ Seek medical advice.</li> </ul> <p>Rinse mouth with water.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

#### 4.2 Most important symptoms and effects, both acute and delayed

See Section 11

#### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

### SECTION 5 FIREFIGHTING MEASURES

#### 5.1. Extinguishing media

- ▶ Water spray or fog.
- ▶ Foam.
- ▶ Dry chemical powder.
- ▶ BCF (where regulations permit).
- ▶ Carbon dioxide.

#### 5.2. Special hazards arising from the substrate or mixture

|                             |             |
|-----------------------------|-------------|
| <b>Fire Incompatibility</b> | None known. |
|-----------------------------|-------------|

#### 5.3. Advice for firefighters

|                      |                                                                                                                                                                                                                                                                                                                                                               |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Fire Fighting</b> | <ul style="list-style-type: none"> <li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▶ Wear full body protective clothing with breathing apparatus.</li> <li>▶ Prevent, by any means available, spillage from entering drains or water course.</li> <li>▶ Use fire fighting procedures suitable for surrounding area.</li> </ul> |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Continued...

## Super Etch, Super Etch LV and Acid Etch Gel/ Liquid

|                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                              | <ul style="list-style-type: none"> <li>▶ <b>Do not</b> approach containers suspected to be hot.</li> <li>▶ Cool fire exposed containers with water spray from a protected location.</li> <li>▶ If safe to do so, remove containers from path of fire.</li> <li>▶ Equipment should be thoroughly decontaminated after use.</li> </ul>                                                                                                                                            |
| <b>Fire/Explosion Hazard</b> | <ul style="list-style-type: none"> <li>▶ Non combustible.</li> <li>▶ Not considered to be a significant fire risk.</li> <li>▶ Acids may react with metals to produce hydrogen, a highly flammable and explosive gas.</li> <li>▶ Heating may cause expansion or decomposition leading to violent rupture of containers.</li> <li>▶ May emit corrosive, poisonous fumes. May emit acid smoke.</li> </ul> <p>Decomposition may produce toxic fumes of; phosphorus oxides (POx)</p> |

## SECTION 6 ACCIDENTAL RELEASE MEASURES

### 6.1. Personal precautions, protective equipment and emergency procedures

See section 8

### 6.2. Environmental precautions

See section 12

### 6.3. Methods and material for containment and cleaning up

|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Minor Spills</b> | <ul style="list-style-type: none"> <li>▶ Drains for storage or use areas should have retention basins for pH adjustments and dilution of spills before discharge or disposal of material.</li> <li>▶ Check regularly for spills and leaks.</li> <li>▶ Clean up all spills immediately.</li> <li>▶ Avoid breathing vapours and contact with skin and eyes.</li> <li>▶ Control personal contact with the substance, by using protective equipment.</li> <li>▶ Contain and absorb spill with sand, earth, inert material or vermiculite.</li> <li>▶ Wipe up.</li> <li>▶ Place in a suitable, labelled container for waste disposal.</li> </ul>                                                                                                                                                                                                                                                                                                                          |
| <b>Major Spills</b> | <ul style="list-style-type: none"> <li>▶ Clear area of personnel and move upwind.</li> <li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▶ Wear full body protective clothing with breathing apparatus.</li> <li>▶ Prevent, by any means available, spillage from entering drains or water course.</li> <li>▶ Stop leak if safe to do so.</li> <li>▶ Contain spill with sand, earth or vermiculite.</li> <li>▶ Collect recoverable product into labelled containers for recycling.</li> <li>▶ Neutralise/decontaminate residue (see Section 13 for specific agent).</li> <li>▶ Collect solid residues and seal in labelled drums for disposal.</li> <li>▶ Wash area and prevent runoff into drains.</li> <li>▶ After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using.</li> <li>▶ If contamination of drains or waterways occurs, advise emergency services.</li> </ul> |

### 6.4. Reference to other sections

Personal Protective Equipment advice is contained in Section 8 of the SDS.

## SECTION 7 HANDLING AND STORAGE

### 7.1. Precautions for safe handling

|                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Safe handling</b>                 | <ul style="list-style-type: none"> <li>▶ Avoid all personal contact, including inhalation.</li> <li>▶ Wear protective clothing when risk of exposure occurs.</li> <li>▶ Use in a well-ventilated area.</li> <li>▶ Avoid contact with moisture.</li> <li>▶ Avoid contact with incompatible materials.</li> <li>▶ <b>When handling, DO NOT eat, drink or smoke.</b></li> <li>▶ Keep containers securely sealed when not in use.</li> <li>▶ Avoid physical damage to containers.</li> <li>▶ Always wash hands with soap and water after handling.</li> <li>▶ Work clothes should be laundered separately. Launder contaminated clothing before re-use.</li> <li>▶ Use good occupational work practice.</li> <li>▶ Observe manufacturer's storage and handling recommendations contained within this SDS.</li> <li>▶ Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.</li> </ul> |
| <b>Fire and explosion protection</b> | See section 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Other information</b>             | <p>Store between 10 and 25 deg. C.</p> <p>Store in a cool dry place.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

### 7.2. Conditions for safe storage, including any incompatibilities

|                                |                                                                                                                                           |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Suitable container</b>      | ▶ <b>DO NOT repack.</b> Use containers supplied by manufacturer only.                                                                     |
| <b>Storage incompatibility</b> | <ul style="list-style-type: none"> <li>▶ Avoid strong bases.</li> <li>▶ Avoid contact with copper, aluminium and their alloys.</li> </ul> |

### 7.3. Specific end use(s)

See section 1.2

## SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1. Control parameters

Continued...



## Super Etch, Super Etch LV and Acid Etch Gel/ Liquid

## DERIVED NO EFFECT LEVEL (DNEL)

Not Available

## PREDICTED NO EFFECT LEVEL (PNEC)

Not Available

## OCCUPATIONAL EXPOSURE LIMITS (OEL)

## INGREDIENT DATA

| Source                                                                                             | Ingredient      | Material name        | TWA                 | STEL                | Peak          | Notes         |
|----------------------------------------------------------------------------------------------------|-----------------|----------------------|---------------------|---------------------|---------------|---------------|
| UK Workplace Exposure Limits (WELs)                                                                | phosphoric acid | Orthophosphoric acid | 1 mg/m <sup>3</sup> | 2 mg/m <sup>3</sup> | Not Available | Not Available |
| European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (English) | phosphoric acid | Orthophosphoric acid | 1 mg/m <sup>3</sup> | 2 mg/m <sup>3</sup> | Not Available | Not Available |
| EU Consolidated List of Indicative Occupational Exposure Limit Values (IOELVs)                     | phosphoric acid | Orthophosphoric acid | 1 mg/m <sup>3</sup> | 2 mg/m <sup>3</sup> | Not Available | Not Available |

## EMERGENCY LIMITS

| Ingredient      | Material name   | TEEL-1        | TEEL-2        | TEEL-3        |
|-----------------|-----------------|---------------|---------------|---------------|
| phosphoric acid | Phosphoric acid | Not Available | Not Available | Not Available |

  

| Ingredient      | Original IDLH            | Revised IDLH            |
|-----------------|--------------------------|-------------------------|
| phosphoric acid | 10,000 mg/m <sup>3</sup> | 1,000 mg/m <sup>3</sup> |

## MATERIAL DATA

## 8.2. Exposure controls

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| 8.2.1. Appropriate engineering controls                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <p>Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.</p> <p>The basic types of engineering controls are:</p> <p>Process controls which involve changing the way a job activity or process is done to reduce the risk.</p> <p>Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use.</p> <p>Employers may need to use multiple types of controls to prevent employee overexposure.</p> |                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <p>General exhaust is adequate under normal operating conditions. Local exhaust ventilation may be required in special circumstances. If risk of overexposure exists, wear approved respirator. Supplied-air type respirator may be required in special circumstances. Correct fit is essential to ensure adequate protection. Provide adequate ventilation in warehouses and enclosed storage areas. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.</p>                                                                                                                                                                                                                                                                                                                                         |                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Type of Contaminant:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Air Speed:                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | solvent, vapours, degreasing etc., evaporating from tank (in still air).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 0.25-0.5 m/s (50-100 f/min)      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 0.5-1 m/s (100-200 f/min.)       |
| direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1-2.5 m/s (200-500 f/min.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                  |
| grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 2.5-10 m/s (500-2000 f/min.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                  |
| <p>Within each range the appropriate value depends on:</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                  |
| Lower end of the range                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Upper end of the range           |
| 1: Room air currents minimal or favourable to capture                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 1: Disturbing room air currents  |
| 2: Contaminants of low toxicity or of nuisance value only.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 2: Contaminants of high toxicity |
| 3: Intermittent, low production.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 3: High production, heavy use    |
| 4: Large hood or large air mass in motion                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 4: Small hood-local control only |
| <p>Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.</p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                  |
| 8.2.2. Personal protection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                  |
| Eye and face protection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <ul style="list-style-type: none"><li>▶ Safety glasses with side shields.</li><li>▶ Chemical goggles.</li><li>▶ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be</li></ul>                                                                                                                                                                                                                                                                                                                                                     |                                  |

Continued...

## Super Etch, Super Etch LV and Acid Etch Gel/ Liquid

|                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                              | <ul style="list-style-type: none"> <li>readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent]</li> </ul> |
| <b>Skin protection</b>       | See Hand protection below                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Hands/feet protection</b> | <ul style="list-style-type: none"> <li>Wear chemical protective gloves, e.g. PVC.</li> <li>Wear safety footwear or safety gumboots, e.g. Rubber</li> <li>Rubber Gloves</li> </ul>                                                                                                                                                                                                                                                                   |
| <b>Body protection</b>       | See Other protection below                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Other protection</b>      | <ul style="list-style-type: none"> <li>Overalls.</li> <li>PVC Apron.</li> <li>PVC protective suit may be required if exposure severe.</li> <li>Eyewash unit.</li> <li>Ensure there is ready access to a safety shower.</li> </ul>                                                                                                                                                                                                                   |
| <b>Thermal hazards</b>       | Not Available                                                                                                                                                                                                                                                                                                                                                                                                                                       |

### Respiratory protection

Type B-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required.

Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

| Required Minimum Protection Factor | Half-Face Respirator | Full-Face Respirator | Powered Air Respirator  |
|------------------------------------|----------------------|----------------------|-------------------------|
| up to 10 x ES                      | B-AUS P2             | -                    | B-PAPR-AUS / Class 1 P2 |
| up to 50 x ES                      | -                    | B-AUS / Class 1 P2   | -                       |
| up to 100 x ES                     | -                    | B-2 P2               | B-PAPR-2 P2 ^           |

^ - Full-face

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO<sub>2</sub>), G = Agricultural chemicals, K = Ammonia(NH<sub>3</sub>), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

### 8.2.3. Environmental exposure controls

See section 12

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

|                                                     |                                              |                                                |                |
|-----------------------------------------------------|----------------------------------------------|------------------------------------------------|----------------|
| <b>Appearance</b>                                   | Blue gel with acrid odour, mixes with water. |                                                |                |
| <b>Physical state</b>                               | Gel                                          | <b>Relative density (Water = 1)</b>            | 1.3            |
| <b>Odour</b>                                        | Not Available                                | <b>Partition coefficient n-octanol / water</b> | Not Available  |
| <b>Odour threshold</b>                              | Not Available                                | <b>Auto-ignition temperature (°C)</b>          | Not Available  |
| <b>pH (as supplied)</b>                             | <1                                           | <b>Decomposition temperature</b>               | Not Available  |
| <b>Melting point / freezing point (°C)</b>          | Not Applicable                               | <b>Viscosity (cSt)</b>                         | Not Available  |
| <b>Initial boiling point and boiling range (°C)</b> | Not Applicable                               | <b>Molecular weight (g/mol)</b>                | Not Applicable |
| <b>Flash point (°C)</b>                             | Not Available                                | <b>Taste</b>                                   | Not Available  |
| <b>Evaporation rate</b>                             | Not Available                                | <b>Explosive properties</b>                    | Not Available  |
| <b>Flammability</b>                                 | Not Available                                | <b>Oxidising properties</b>                    | Not Available  |
| <b>Upper Explosive Limit (%)</b>                    | Not Available                                | <b>Surface Tension (dyn/cm or mN/m)</b>        | Not Available  |
| <b>Lower Explosive Limit (%)</b>                    | Not Available                                | <b>Volatile Component (%vol)</b>               | Not Available  |
| <b>Vapour pressure (kPa)</b>                        | Not Available                                | <b>Gas group</b>                               | Not Available  |
| <b>Solubility in water (g/L)</b>                    | Miscible                                     | <b>pH as a solution (1%)</b>                   | Not Available  |
| <b>Vapour density (Air = 1)</b>                     | Not Available                                | <b>VOC g/L</b>                                 | Not Available  |

### 9.2. Other information

Not Available

## SECTION 10 STABILITY AND REACTIVITY

|                                                 |                                                                                                 |
|-------------------------------------------------|-------------------------------------------------------------------------------------------------|
| <b>10.1.Reactivity</b>                          | See section 7.2                                                                                 |
| <b>10.2.Chemical stability</b>                  | <ul style="list-style-type: none"> <li>Contact with alkaline material liberates heat</li> </ul> |
| <b>10.3. Possibility of hazardous reactions</b> | See section 7.2                                                                                 |
| <b>10.4. Conditions to avoid</b>                | See section 7.2                                                                                 |
| <b>10.5. Incompatible materials</b>             | See section 7.2                                                                                 |

Continued...

## Super Etch, Super Etch LV and Acid Etch Gel/ Liquid

## 10.6. Hazardous decomposition products

See section 5.3

## SECTION 11 TOXICOLOGICAL INFORMATION

## 11.1. Information on toxicological effects

|              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Inhaled      | The material is not thought to produce adverse health effects following inhalation (as classified by EC Directives using animal models). Nevertheless, adverse systemic effects have been produced following exposure of animals by at least one other route and good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Ingestion    | The material can produce chemical burns within the oral cavity and gastrointestinal tract following ingestion. Accidental ingestion of the material may be damaging to the health of the individual.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Skin Contact | The material can produce chemical burns following direct contact with the skin. Open cuts, abraded or irritated skin should not be exposed to this material. Entry into the blood-stream through, for example, cuts, abrasions, puncture wounds or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Eye          | The material can produce chemical burns to the eye following direct contact. Vapours or mists may be extremely irritating. When applied to the eye(s) of animals, the material produces severe ocular lesions which are present twenty-four hours or more after instillation.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Chronic      | Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems. Repeated or prolonged exposure to acids may result in the erosion of teeth, inflammatory and ulcerative changes in the mouth and necrosis (rarely) of the jaw. Bronchial irritation, with cough, and frequent attacks of bronchial pneumonia may ensue. Gastrointestinal disturbances may also occur. Chronic exposures may result in dermatitis and/or conjunctivitis. The impact of inhaled acidic agents on the respiratory tract depends upon a number of interrelated factors. These include physicochemical characteristics, e.g., gas versus aerosol; particle size (small particles can penetrate deeper into the lung); water solubility (more soluble agents are more likely to be removed in the nose and mouth). Given the general lack of information on the particle size of aerosols involved in occupational exposures to acids, it is difficult to identify their principal deposition site within the respiratory tract. Acid mists containing particles with a diameter of up to a few micrometers will be deposited in both the upper and lower airways. They are irritating to mucous epithelia, they cause dental erosion, and they produce acute effects in the lungs (symptoms and changes in pulmonary function). Asthmatics appear to be at particular risk for pulmonary effects. |

|                                                     |                                                          |                                    |
|-----------------------------------------------------|----------------------------------------------------------|------------------------------------|
| Super Etch, Super Etch LV and Acid Etch Gel/ Liquid | TOXICITY                                                 | IRRITATION                         |
|                                                     | Not Available                                            | Not Available                      |
| phosphoric acid                                     | TOXICITY                                                 | IRRITATION                         |
|                                                     | Dermal (rabbit) LD50: >1260 mg/kg <sup>[2]</sup>         | [Monsanto]*                        |
|                                                     | Inhalation (rat) LC50: 0.0255 mg/L/4h <sup>[2]</sup>     | Eye (rabbit): 119 mg - SEVERE      |
|                                                     | Oral (rat) LD50: 1.7 ml/100 g body weight <sup>[1]</sup> | Skin (rabbit): 595 mg/24h - SEVERE |

## Legend:

1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. \* Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances

|                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PHOSPHORIC ACID | <p>No significant acute toxicological data identified in literature search. for acid mists, aerosols, vapours</p> <p>Data from assays for genotoxic activity in vitro suggest that eukaryotic cells are susceptible to genetic damage when the pH falls to about 6.5. Cells from the respiratory tract have not been examined in this respect. Mucous secretion may protect the cells of the airways from direct exposure to inhaled acidic mists, just as mucous plays an important role in protecting the gastric epithelium from its auto-secreted hydrochloric acid. In considering whether pH itself induces genotoxic events in vivo in the respiratory system, comparison should be made with the human stomach, in which gastric juice may be at pH 1-2 under fasting or nocturnal conditions, and with the human urinary bladder, in which the pH of urine can range from &lt;5 to &gt; 7 and normally averages 6.2. Furthermore, exposures to low pH in vivo differ from exposures in vitro in that, in vivo, only a portion of the cell surface is subjected to the adverse conditions, so that perturbation of intracellular homeostasis may be maintained more readily than in vitro.</p> <p>The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.</p> <p>The material may produce severe skin irritation after prolonged or repeated exposure, and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) thickening of the epidermis.</p> <p>Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis. Prolonged contact is unlikely, given the severity of response, but repeated exposures may produce severe ulceration.</p> <p>Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. Industrial bronchitis, on the other hand, is a disorder that occurs as result of exposure due to high concentrations of irritating substance (often particulate in nature) and is completely reversible after exposure ceases. The disorder is characterised by dyspnea, cough and mucus production.</p> <p>phosphoric acid ( 85%)</p> |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                   |   |                          |   |
|-----------------------------------|---|--------------------------|---|
| Acute Toxicity                    | ☐ | Carcinogenicity          | ☐ |
| Skin Irritation/Corrosion         | ✓ | Reproductivity           | ☐ |
| Serious Eye Damage/Irritation     | ✓ | STOT - Single Exposure   | ☐ |
| Respiratory or Skin sensitisation | ☐ | STOT - Repeated Exposure | ☐ |
| Mutagenicity                      | ☐ | Aspiration Hazard        | ☐ |

Continued...

## Super Etch, Super Etch LV and Acid Etch Gel/ Liquid

**Legend:**

- - Data available but does not fit the criteria for classification
- ✓ - Data required to make classification available
- - Data Not Available to make classification

## SECTION 12 ECOLOGICAL INFORMATION

## 12.1. Toxicity

| Ingredient      | Endpoint                                                                                                                                                                                                                                                                                                                                                                           | Test Duration (hr) | Species                       | Value    | Source |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-------------------------------|----------|--------|
| phosphoric acid | LC50                                                                                                                                                                                                                                                                                                                                                                               | 96                 | Fish                          | 75.1mg/L | 2      |
| phosphoric acid | EC50                                                                                                                                                                                                                                                                                                                                                                               | 48                 | Crustacea                     | >100mg/L | 2      |
| phosphoric acid | EC50                                                                                                                                                                                                                                                                                                                                                                               | 72                 | Algae or other aquatic plants | >100mg/L | 2      |
| phosphoric acid | EC50                                                                                                                                                                                                                                                                                                                                                                               | 72                 | Algae or other aquatic plants | 77.9mg/L | 2      |
| phosphoric acid | NOEC                                                                                                                                                                                                                                                                                                                                                                               | 72                 | Algae or other aquatic plants | <7.5mg/L | 2      |
| <b>Legend:</b>  | Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data |                    |                               |          |        |

**DO NOT** discharge into sewer or waterways.

## 12.2. Persistence and degradability

| Ingredient      | Persistence: Water/Soil | Persistence: Air |
|-----------------|-------------------------|------------------|
| phosphoric acid | HIGH                    | HIGH             |

## 12.3. Bioaccumulative potential

| Ingredient      | Bioaccumulation        |
|-----------------|------------------------|
| phosphoric acid | LOW (LogKOW = -0.7699) |

## 12.4. Mobility in soil

| Ingredient      | Mobility       |
|-----------------|----------------|
| phosphoric acid | HIGH (KOC = 1) |

## 12.5. Results of PBT and vPvB assessment

|                         | P             | B             | T             |
|-------------------------|---------------|---------------|---------------|
| Relevant available data | Not Available | Not Available | Not Available |
| PBT Criteria fulfilled? | Not Available | Not Available | Not Available |

## 12.6. Other adverse effects

No data available

## SECTION 13 DISPOSAL CONSIDERATIONS

## 13.1. Waste treatment methods

|                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product / Packaging disposal</b> | <ul style="list-style-type: none"> <li>▶ <b>DO NOT</b> allow wash water from cleaning or process equipment to enter drains.</li> <li>▶ It may be necessary to collect all wash water for treatment before disposal.</li> <li>▶ In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.</li> <li>▶ Where in doubt contact the responsible authority.</li> <li>▶ Recycle wherever possible.</li> <li>▶ Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.</li> <li>▶ Treat and neutralise at an approved treatment plant. Treatment should involve: Mixing or slurring in water; Neutralisation followed by: burial in a land-fill specifically licenced to accept chemical and / or pharmaceutical wastes or Incineration in a licenced apparatus (after admixture with suitable combustible material)</li> <li>▶ Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.</li> </ul> |
| <b>Waste treatment options</b>      | Not Available                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Sewage disposal options</b>      | Not Available                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

## SECTION 14 TRANSPORT INFORMATION

## Labels Required

|                         |                                                                                     |
|-------------------------|-------------------------------------------------------------------------------------|
|                         |  |
| <b>Marine Pollutant</b> | NO                                                                                  |
| <b>HAZCHEM</b>          | 2R                                                                                  |

## Land transport (ADR)

Continued...

## Super Etch, Super Etch LV and Acid Etch Gel/ Liquid

|                                    |                                                                                                                                                      |
|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| 14.1.UN number                     | 1805                                                                                                                                                 |
| 14.2.Packing group                 | III                                                                                                                                                  |
| 14.3.UN proper shipping name       | PHOSPHORIC ACID, SOLUTION                                                                                                                            |
| 14.4.Environmental hazard          | Not Applicable                                                                                                                                       |
| 14.5. Transport hazard class(es)   | Class : 8<br>Subrisk : Not Applicable                                                                                                                |
| 14.6. Special precautions for user | Hazard identification (Kemler) : 80<br>Classification code : C1<br>Hazard Label : 8<br>Special provisions : Not Applicable<br>Limited quantity : 5 L |

## Air transport (ICAO-IATA / DGR)

|                                    |                                                                                                                                                                                                                                                                                                                                            |
|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 14.1. UN number                    | 1805                                                                                                                                                                                                                                                                                                                                       |
| 14.2. Packing group                | III                                                                                                                                                                                                                                                                                                                                        |
| 14.3. UN proper shipping name      | Phosphoric acid, solution                                                                                                                                                                                                                                                                                                                  |
| 14.4. Environmental hazard         | Not Applicable                                                                                                                                                                                                                                                                                                                             |
| 14.5. Transport hazard class(es)   | ICAO/IATA Class : 8<br>ICAO / IATA Subrisk : Not Applicable<br>ERG Code : 8L                                                                                                                                                                                                                                                               |
| 14.6. Special precautions for user | Special provisions : A3A803<br>Cargo Only Packing Instructions : 856<br>Cargo Only Maximum Qty / Pack : 60 L<br>Passenger and Cargo Packing Instructions : 852<br>Passenger and Cargo Maximum Qty / Pack : 5 L<br>Passenger and Cargo Limited Quantity Packing Instructions : Y841<br>Passenger and Cargo Limited Maximum Qty / Pack : 1 L |

## Sea transport (IMDG-Code / GGVSee)

|                                    |                                                                               |
|------------------------------------|-------------------------------------------------------------------------------|
| 14.1. UN number                    | 1805                                                                          |
| 14.2. Packing group                | III                                                                           |
| 14.3. UN proper shipping name      | PHOSPHORIC ACID SOLUTION                                                      |
| 14.4. Environmental hazard         | Not Applicable                                                                |
| 14.5. Transport hazard class(es)   | IMDG Class : 8<br>IMDG Subrisk : Not Applicable                               |
| 14.6. Special precautions for user | EMS Number : F-A, S-B<br>Special provisions : 223<br>Limited Quantities : 5 L |

## Inland waterways transport (ADN)

|                                    |                                                                                                                                                   |
|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| 14.1. UN number                    | 1805                                                                                                                                              |
| 14.2. Packing group                | III                                                                                                                                               |
| 14.3. UN proper shipping name      | PHOSPHORIC ACID, SOLUTION                                                                                                                         |
| 14.4. Environmental hazard         | Not Applicable                                                                                                                                    |
| 14.5. Transport hazard class(es)   | 8 : Not Applicable                                                                                                                                |
| 14.6. Special precautions for user | Classification code : C1<br>Special provisions : Not Applicable<br>Limited quantity : 5 L<br>Equipment required : PP, EP<br>Fire cones number : 0 |

## Transport in bulk according to Annex II of MARPOL and the IBC code

Continued...

## Super Etch, Super Etch LV and Acid Etch Gel/ Liquid

Not Applicable

If packed as Chemical kits the following classification may be considered if all ICAO/IATA transport requirements are met: Chemical Kit UN3316 - Class 9.

## SECTION 15 REGULATORY INFORMATION

## 15.1. Safety, health and environmental regulations / legislation specific for the substance or mixture

## PHOSPHORIC ACID(7664-38-2) IS FOUND ON THE FOLLOWING REGULATORY LISTS

|                                                                                                                                  |                                                                                                                                   |
|----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| EU Consolidated List of Indicative Occupational Exposure Limit Values (IOELVs)                                                   | European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Hungarian)                              |
| European Customs Inventory of Chemical Substances ECICS (English)                                                                | European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Italian)                                |
| European Union - European Inventory of Existing Commercial Chemical Substances (EINECS) (English)                                | European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Latvian)                                |
| European Union (EU) Annex I to Directive 67/548/EEC on Classification and Labelling of Dangerous Substances - updated by ATP: 31 | European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Lithuanian)                             |
| European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Bulgarian)                             | European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Maltese)                                |
| European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Czech)                                 | European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Polish)                                 |
| European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Danish)                                | European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Portuguese)                             |
| European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Dutch)                                 | European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Romanian)                               |
| European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (English)                               | European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Slovak)                                 |
| European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Estonian)                              | European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Slovenian)                              |
| European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Finnish)                               | European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Spanish)                                |
| European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (French)                                | European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Swedish)                                |
| European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (German)                                | European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI |
| European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Greek)                                 | UK Workplace Exposure Limits (WELs)                                                                                               |

This safety data sheet is in compliance with the following EU legislation and its adaptations - as far as applicable - : 67/548/EEC, 1999/45/EC, 98/24/EC, 92/85/EC, 94/33/EC, 91/689/EEC, 1999/13/EC, Commission Regulation (EU) 2015/830, Regulation (EC) No 1272/2008 and their amendments as well as the following British legislation: - The Control of Substances Hazardous to Health Regulations (COSHH) 2002 - COSHH Essentials - The Management of Health and Safety at Work Regulations 1999

## 15.2. Chemical safety assessment

For further information please look at the Chemical Safety Assessment and Exposure Scenarios prepared by your Supply Chain if available.

## ECHA SUMMARY

| Ingredient      | CAS number | Index No     | ECHA Dossier          |
|-----------------|------------|--------------|-----------------------|
| phosphoric acid | 7664-38-2  | 015-011-00-6 | 01-2119485924-24-0001 |

  

| Harmonisation (C&L Inventory) | Hazard Class and Category Code(s)                                                                             | Pictograms Signal Word Code(s) | Hazard Statement Code(s)           |
|-------------------------------|---------------------------------------------------------------------------------------------------------------|--------------------------------|------------------------------------|
| 1                             | Skin Corr. 1B                                                                                                 | GHS05, Dgr                     | H314                               |
| 2                             | Met. Corr. 1, Skin Corr. 1B, Eye Dam. 1, Acute Tox. 4, STOT SE 3, Not Classified, Skin Corr. 1C, Eye Irrit. 2 | GHS05, Dgr                     | H290, H314, H318, H302, H335, H312 |

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

| National Inventory            | Status                                                                                                                                                                                    |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Australia - AICS              | Y                                                                                                                                                                                         |
| Canada - DSL                  | Y                                                                                                                                                                                         |
| Canada - NDSL                 | N (phosphoric acid)                                                                                                                                                                       |
| China - IECSC                 | Y                                                                                                                                                                                         |
| Europe - EINEC / ELINCS / NLP | Y                                                                                                                                                                                         |
| Japan - ENCS                  | Y                                                                                                                                                                                         |
| Korea - KECI                  | Y                                                                                                                                                                                         |
| New Zealand - NZIoC           | Y                                                                                                                                                                                         |
| Philippines - PICCS           | Y                                                                                                                                                                                         |
| USA - TSCA                    | Y                                                                                                                                                                                         |
| <b>Legend:</b>                | Y = All ingredients are on the inventory<br>N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing (see specific ingredients in brackets) |

## SECTION 16 OTHER INFORMATION

## Full text Risk and Hazard codes

Continued...

## Super Etch, Super Etch LV and Acid Etch Gel/ Liquid

|             |                                   |
|-------------|-----------------------------------|
| <b>H302</b> | Harmful if swallowed.             |
| <b>H312</b> | Harmful in contact with skin.     |
| <b>H335</b> | May cause respiratory irritation. |

## Other information

## DSD / DPD label elements



Relevant risk statements are found in section 2.1

|                                |   |
|--------------------------------|---|
| <b>Indication(s) of danger</b> | C |
|--------------------------------|---|

## SAFETY ADVICE

|            |                                                                                                                              |
|------------|------------------------------------------------------------------------------------------------------------------------------|
| <b>S01</b> | Keep locked up.                                                                                                              |
| <b>S02</b> | Keep out of reach of children.                                                                                               |
| <b>S04</b> | Keep away from living quarters.                                                                                              |
| <b>S20</b> | When using do not eat or drink.                                                                                              |
| <b>S21</b> | When using do not smoke.                                                                                                     |
| <b>S23</b> | Do not breathe gas/fumes/vapour/spray.                                                                                       |
| <b>S26</b> | In case of contact with eyes, rinse with plenty of water and contact Doctor or Poisons Information Centre.                   |
| <b>S28</b> | After contact with skin, wash immediately with plenty of water                                                               |
| <b>S35</b> | This material and its container must be disposed of in a safe way.                                                           |
| <b>S36</b> | Wear suitable protective clothing.                                                                                           |
| <b>S37</b> | Wear suitable gloves.                                                                                                        |
| <b>S39</b> | Wear eye/face protection.                                                                                                    |
| <b>S40</b> | To clean the floor and all objects contaminated by this material, use water.                                                 |
| <b>S45</b> | In case of accident or if you feel unwell IMMEDIATELY contact Doctor or Poisons Information Centre (show label if possible). |
| <b>S46</b> | If swallowed, seek medical advice immediately and show this container or label.                                              |
| <b>S56</b> | Dispose of this material and its container at hazardous or special waste collection point.                                   |
| <b>S64</b> | If swallowed, rinse mouth with water (only if the person is conscious).                                                      |

## Ingredients with multiple cas numbers

| Name            | CAS No                |
|-----------------|-----------------------|
| phosphoric acid | 16271-20-8, 7664-38-2 |

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by SDI Limited using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

For detailed advice on Personal Protective Equipment, refer to the following EU CEN Standards:

EN 166 Personal eye-protection  
 EN 340 Protective clothing  
 EN 374 Protective gloves against chemicals and micro-organisms  
 EN 13832 Footwear protecting against chemicals  
 EN 133 Respiratory protective devices

## Definitions and abbreviations

PC – TWA: Permissible Concentration-Time Weighted Average  
 PC – STEL: Permissible Concentration-Short Term Exposure Limit  
 IARC: International Agency for Research on Cancer  
 ACGIH: American Conference of Governmental Industrial Hygienists  
 STEL: Short Term Exposure Limit  
 TEEL: Temporary Emergency Exposure Limit.  
 IDLH: Immediately Dangerous to Life or Health Concentrations  
 OSF: Odour Safety Factor  
 NOAEL :No Observed Adverse Effect Level  
 LOAEL: Lowest Observed Adverse Effect Level  
 TLV: Threshold Limit Value  
 LOD: Limit Of Detection  
 OTV: Odour Threshold Value  
 BCF: BioConcentration Factors  
 BEI: Biological Exposure Index

The information contained in the Safety Data Sheet is based on data considered to be accurate, however, no warranty is expressed or implied regarding the accuracy of the data or the results to be obtained from the use thereof.

## Other information:

Prepared by: SDI Limited  
 3-15 Brunsdon Street, Bayswater Victoria, 3153, Australia  
 Phone Number: +61 3 8727 7111

Continued...

## **Super Etch, Super Etch LV and Acid Etch Gel/ Liquid**

Date of preparation/revision: 23rd September 2015  
Department issuing SDS: Research and Development  
Contact: Technical Director