# Lithium-ion battery

**SDI Limited**

Version Num: **5.1.1.1**
Fiche de données de sécurité (Conforme au Règlement (CE) n ° 2015/830)

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date initiale: **Pas Disponible**
L.REACH.FRA.FR

## SECTION 1 IDENTIFICATION DE LA SUBSTANCE/DU MÉLANGE ET DE LA SOCIÉTÉ/L'ENTREPRISE

### 1.1.Identificateur de produit

| | |
|---|---|
| **Nom du produit** | Lithium-ion battery |
| **Synonymes** | Pas Disponible |
| **Nom d'expédition** | LITHIUM ION BATTERIES (including lithium ion polymer batteries) |
| **Autres moyens d'identification** | Pas Disponible |

### 1.2. Utilisations identifiées pertinentes de la substance ou du mélange et utilisations déconseillées

| | |
|---|---|
| **Utilisations identifiées pertinentes :** | Utilisation telle que définie par le fournisseur. |
| **Utilisations déconseillées** | Sans Objet |

### 1.3. Renseignements concernant le fournisseur de la fiche de données de sécurité

| | | | |
|---|---|---|---|
| **Nom commercial de l'entreprise** | SDI Limited | SDI Brazil Industria E Comercio Ltda | SDI Germany GmbH |
| **Adresse** | 3-15 Brunsdon Street VIC Bayswater 3153 Australia | Rua Dr. Virgilio de Carvalho Pinto, 612 São Paulo CEP 05415-020 Brazil | Hansestrasse 85 Cologne D-51149 Germany |
| **Téléphone** | +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 |
| **Site Internet** | www.sdi.com.au | www.sdi.com.au | www.sdi.com.au |
| **Courriel** | info@sdi.com.au | brasil@sdi.com.au | germany@sdi.com.au |

| | |
|---|---|
| **Nom commercial de l'entreprise** | SDI (North America) Inc. |
| **Adresse** | 1279 Hamilton Parkway IL Itasca 60143 United States |
| **Téléphone** | +1 630 361 9200 (Business hours) |
| **Fax** | Pas Disponible |
| **Site Internet** | Pas Disponible |
| **Courriel** | USA.Canada@sdi.com.au |

### 1.4. Numéro d'appel d'urgence

| | | | |
|---|---|---|---|
| **Association / Organisation** | SDI Limited | Pas Disponible | Pas Disponible |
| **Numéro de téléphone d'appel d'urgence** | +61 3 8727 7111 | Pas Disponible | Pas Disponible |
| **Autres numéros de téléphone d'urgence** | ray.cahill@sdi.com.au | Pas Disponible | Pas Disponible |

| | |
|---|---|
| **Association / Organisation** | Pas Disponible |
| **Numéro de téléphone d'appel d'urgence** | +61 3 8727 7111 |
| **Autres numéros de téléphone d'urgence** | Pas Disponible |

## SECTION 2 IDENTIFICATION DES DANGERS

### 2.1.Classification de la substance ou du mélange

**N'est pas considéré comme un mélange dangereux conformément à la directive 1999/45/CE, Reg. (CE) n ° 1272/2008 (le cas échéant) et de leurs amendements. Classés comme marchandises dangereuses à des fins de transport.**

| | |
|---|---|
| **Classification DSD** | En cas d'amalgame, la classification a été préparée par le DPD suivant (Directive 1999/45/EC) ou CLP (Règlement CE) No. 1272/2008 règlements |

**Continued...**

| | |
|---|---|
| **Classification DPD** | Sans Objet |
| **Classification selon la directive EC Numéro 1272/2008 [CLP]** | Sans Objet |

### 2.2. Éléments d'étiquetage

| | |
|---|---|
| **Eléments pour étiquette CLP** | Sans Objet |
| **MENTION D'AVERTISSEMENT** | **SANS OBJET** |

**Déclaration(s) sur les risques**

Sans Objet

**Déclaration(s) supplémentaires**

| | |
|---|---|
| **EUH210** | Fiche de données de sécurité disponible sur demande |

**Déclarations de Sécurité: Prévention**

Sans Objet

**Déclarations de Sécurité: Réponse**

Sans Objet

**Déclarations de Sécurité: Stockage**

Sans Objet

**Déclarations de Sécurité: Élimination**

Sans Objet

### 2.3. Autres dangers

| | |
|---|---|
| **cadmium** | En vente à l'Agence européenne des produits chimiques (ECHA) Liste candidate des substances extrêmement préoccupantes pour autorisation |

## SECTION 3 COMPOSITION/INFORMATIONS SUR LES COMPOSANTS

### 3.1.Substances

Voir Composition sur les ingrédients Section 3.2

### 3.2.Mélanges

| 1.Numéro CAS<br>2.EC Num<br>3.Numéro index<br>4.Numéro REACH | %[poids] | Nom | Classification selon la directive 67/548/EEC [DSD] | Classification selon la directive EC Numéro 1272/2008 [CLP] |
|---|---|---|---|---|
| | | Battery Cell contains | | |
| 1.12190-79-3<br>2.235-362-0<br>3.Pas Disponible<br>4.Pas Disponible | <38 | dioxyde-de-cobalt-et-de-lithium | Sans Objet | Sans Objet |
| 1.21324-40-3<br>2.244-334-7<br>3.Pas Disponible<br>4.01-2119383485-29-XXXX | <3 | hexafluorophosphate(1-) de lithium | R22, R24, R34, R41 [1] | Corrosion de métal catégorie 1, TOXICITÉ AIGUË PAR VOIE ORALE Catégorie 4, TOXICITÉ AIGUË PAR VOIE CUTANÉE Catégorie 3, Irritation/corrosion cutanée catégorie 1A, Dommage occulaire important catégorie 1; H290, H302, H311, H314, H318 [1] |
| 1.96-49-1<br>2.202-510-0<br>3.Pas Disponible<br>4.01-2119540523-46-XXXX | <6 | carbonate-d'éthylène | R19, R37/38, R41 [1] | Irritation/corrosion cutanée catégorie 2, Dommage occulaire important catégorie 1, Specific target organ toxicity - single exposure Category 3 (respiratory tract irritation); H315, H318, H335, EUH019 [1] |
| 1.Pas Disponible<br>2.Pas Disponible<br>3.Pas Disponible<br>4.Pas Disponible | <8 | chain carbonate | Sans Objet | Sans Objet |
| 1.7782-42-5<br>2.231-955-3<br>3.Pas Disponible<br>4.01-2119486977-12-XXXX, 01-2119875125-36-XXXX | <20 | graphite | R36/37, R48/20 [1] | Irritation occulaire catégorie 2, Specific target organ toxicity - single exposure Category 3 (respiratory tract irritation), TOXICITÉ SYSTÉMIQUE POUR CERTAINS ORGANES CIBLES Catégorie 2; H319, H335, H373 [1] |
| 1.7439-92-1<br>2.231-100-4<br>3.082-002-00-1<br>4.01-2119513221-59-XXXX | <0.1 | plomb | R61, R26/27/28, R33, R62, R50/53 [2] | TOXICITÉ POUR LA REPRODUCTION Catégorie 1A, TOXICITÉ AIGUË PAR INHALATION Catégorie 2, TOXICITÉ AIGUË PAR VOIE CUTANÉE Catégorie 1, TOXICITÉ AIGUË PAR VOIE ORALE Catégorie 2, TOXICITÉ SYSTÉMIQUE POUR CERTAINS ORGANES CIBLES Catégorie 2, TOXICITÉ (AIGUË) POUR LE MILIEU AQUATIQUE Catégorie 1, TOXICITÉ (CHRONIQUE) POUR LE MILIEU AQUATIQUE Catégorie 1; H360Df, H330, H310, H300, H373, H400, H410 [3] |
| 1.7439-97-6<br>2.231-106-7<br>3.080-001-00-0<br>4.01-2119548380-42-XXXX | <0.0005 | mercure | R61, R26, R48/23, R50/53 [2] | Toxicité pour la reproduction catégorie 1B, TOXICITÉ AIGUË PAR INHALATION Catégorie 2, TOXICITÉ SYSTÉMIQUE POUR CERTAINS ORGANES CIBLES Catégorie 1, TOXICITÉ (AIGUË) POUR LE MILIEU AQUATIQUE Catégorie 1, TOXICITÉ (CHRONIQUE) POUR LE MILIEU AQUATIQUE Catégorie 1; H360D, H330, H372, H400, H410 [3] |

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| | | | | |
|---|---|---|---|---|
| | | Note: other 25% includes the below meterials: | | |
| | | Al (Positive Base Film, Cap, Can, Tab) | | |
| | | Cu (Negative film base) | | |
| | | Ni (Tab, Terminal) | | |
| | | Fe (Terminal) | | |
| | | Resin (PP, PE, PET) (Separator, Plastic, Parts, Insulator) | | |
| | | Circuit Module contains | | |
| 1.7439-92-1<br>2.231-100-4<br>3.082-002-00-1<br>4.01-2119513221-59-XXXX | <0.1 | plomb | R61, R26/27/28, R33, R62, R50/53 [2] | TOXICITÉ POUR LA REPRODUCTION Catégorie 1A, TOXICITÉ AIGUË PAR INHALATION Catégorie 2, TOXICITÉ AIGUË PAR VOIE CUTANÉE Catégorie 1, TOXICITÉ AIGUË PAR VOIE ORALE Catégorie 2, TOXICITÉ SYSTÉMIQUE POUR CERTAINS ORGANES CIBLES Catégorie 2, TOXICITÉ (AIGUË) POUR LE MILIEU AQUATIQUE Catégorie 1, TOXICITÉ (CHRONIQUE) POUR LE MILIEU AQUATIQUE Catégorie 1; H360Df, H330, H310, H300, H373, H400, H410 [3] |
| 1.7439-97-6<br>2.231-106-7<br>3.080-001-00-0<br>4.01-2119548380-42-XXXX | | mercure | R61, R26, R48/23, R50/53 [2] | Toxicité pour la reproduction catégorie 1B, TOXICITÉ AIGUË PAR INHALATION Catégorie 2, TOXICITÉ SYSTÉMIQUE POUR CERTAINS ORGANES CIBLES Catégorie 1, TOXICITÉ (AIGUË) POUR LE MILIEU AQUATIQUE Catégorie 1, TOXICITÉ (CHRONIQUE) POUR LE MILIEU AQUATIQUE Catégorie 1; H360D, H330, H372, H400, H410 [3] |
| 1.7440-47-3<br>2.231-157-5<br>3.Pas Disponible<br>4.01-2119485652-31-XXXX | | chrome | R40(3), R52 [1] | CANCÉROGÉNICITÉ Catégorie 2; H351 [1] |
| 1.7440-43-9<br>2.231-152-8<br>3.048-002-00-0, 048-011-00-X<br>4.01-2119489023-40-XXXX | | cadmium | R45, R17, R26, R48/23/25, R62, R63, R68, R50/53 [2] | Solide Pyrophorique de Catégorie 1, CANCÉROGÉNICITÉ Catégorie 1B, MUTAGÉNICITÉ POUR LES CELLULES GERMINALES Catégorie 2, TOXICITÉ POUR LA REPRODUCTION Catégorie 2, TOXICITÉ AIGUË PAR INHALATION Catégorie 2, TOXICITÉ SYSTÉMIQUE POUR CERTAINS ORGANES CIBLES Catégorie 1, TOXICITÉ (AIGUË) POUR LE MILIEU AQUATIQUE Catégorie 1, TOXICITÉ (CHRONIQUE) POUR LE MILIEU AQUATIQUE Catégorie 1; H250, H350, H341, H361fd, H330, H372, H400, H410 [3] |
| | | plastic case and Si2O | | |
| | | Plastic Parts and Paints contains | | |
| 1.25971-63-5<br>2.Pas Disponible<br>3.Pas Disponible<br>4.Pas Disponible | >81 | bisphenol A/ phosgene polymer | Sans Objet | Sans Objet |
| 1.Pas Disponible<br>2.Pas Disponible<br>3.Pas Disponible<br>4.Pas Disponible | <12 | flame retardant | Sans Objet | Sans Objet |
| 1.Pas Disponible<br>2.Pas Disponible<br>3.Pas Disponible<br>4.Pas Disponible | <7 | elastomer | Sans Objet | Sans Objet |
| ***Légende:*** | *1. Classé par fournisseur; 2. Classification tirée CE directive 67/548/CEE - Annexe I ; 3. Classification tirée la directive CE 1272/2008 - Annexe VI 4. Classement établi à partir de C & L* | | | |

## SECTION 4 PREMIERS SECOURS

### 4.1. Description des premiers secours

| | |
|---|---|
| **Général** | Si ce produit entre en contact avec la peau :<br>▸ Lavez les régions touchées avec beaucoup d'eau (et du savon si possible).<br>▸ Consultez un médecin s'il y a une irritation.<br>Si ce produit entre en contact avec les yeux :<br>▸ Maintenir immédiatement les yeux ouverts et laver de manière continue pendant au moins 15 minutes avec de l'eau claire.<br>▸ S'assurer de la complète irrigation des yeux en conservant les paupières ouvertes et loin des yeux et en bougeant les paupières en soulevant occasionnellement les paupières hautes et basses.<br>▸ Transporter sans délai à l'hôpital ou chez un docteur.<br>▸ Des lentilles de contact ne doivent être retirées que par une personne formée.<br>If exposure to internal materials due to damaged outer casing:<br>▸ Si des vapeurs ou produits combustibles sont inhalés, s'éloigner de la zone contaminée.<br>▸ Consulter un médecin.<br>Non considérée comme une voie d'entrée normale.<br>▸ Pour conseil, contacter un Centre Anti-Poison ou un docteur.<br>▸ Un traitement urgent en hôpital est vraisemblablement nécessaire.<br>▸ NE PAS faire vomir.<br>▸ Si un vomissement survient, pencher le patient en avant ou placer le sur son côté gauche (si possible la tête en position basse) pour maintenir les voies respiratoires ouvertes et prévenir une aspiration.<br>▸ Surveiller le patient avec attention.<br>▸ Ne jamais donner de liquide à une personne présentant des signes d'endormissement ou ayant une conscience réduite, i.e. devenant inconsciente.<br>▸ Donner de l'eau (ou du lait) pour rincer la bouche, puis fournir du liquide lentement et autant que la victime peut en boire sans gène.<br>▸ Transporter sans délai à l'hôpital ou chez un docteur. |

**Continued...**

| | |
|---|---|
| **Contact des yeux** | Si ce produit entre en contact avec les yeux :<br>▸ Maintenir immédiatement les yeux ouverts et laver de manière continue pendant au moins 15 minutes avec de l'eau claire.<br>▸ S'assurer de la complète irrigation des yeux en conservant les paupières ouvertes et loin des yeux et en bougeant les paupières en soulevant occasionnellement les paupières hautes et basses.<br>▸ Transporter sans délai à l'hôpital ou chez un docteur.<br>▸ Des lentilles de contact ne doivent être retirées que par une personne formée.<br>If exposure to internal materials due to damaged outer casing: |
| **Contact avec la peau** | Si ce produit entre en contact avec la peau :<br>▸ Lavez les régions touchées avec beaucoup d'eau (et du savon si possible).<br>▸ Consultez un médecin s'il y a une irritation. |
| **Inhalation** | ▸ Si des vapeurs ou produits combustibles sont inhalés, s'éloigner de la zone contaminée.<br>▸ Consulter un médecin. |
| **Ingestion** | Non considérée comme une voie d'entrée normale.<br>▸ Pour conseil, contacter un Centre Anti-Poison ou un docteur.<br>▸ Un traitement urgent en hôpital est vraisemblablement nécessaire.<br>▸ NE PAS faire vomir.<br>▸ Si un vomissement survient, pencher le patient en avant ou placer le sur son côté gauche (si possible la tête en position basse) pour maintenir les voies respiratoires ouvertes et prévenir une aspiration.<br>▸ Surveiller le patient avec attention.<br>▸ Ne jamais donner de liquide à une personne présentant des signes d'endormissement ou ayant une conscience réduite, i.e. devenant inconsciente.<br>▸ Donner de l'eau (ou du lait) pour rincer la bouche, puis fournir du liquide lentement et autant que la victime peut en boire sans gène.<br>▸ Transporter sans délai à l'hôpital ou chez un docteur. |

### 4.2 Principaux symptômes et effets, aigus et différés

Voir la section 11

### 4.3. Indication des éventuels soins médicaux immédiats et traitements particuliers nécessaires

Traiter symptomatiquement.

## SECTION 5 MESURES DE LUTTE CONTRE L'INCENDIE

### 5.1. Moyens d'extinction

Utiliser de la poudre chimique sèche, de la mousse anti-alcool, du dioxyde de carbone ou de l'eau sous forme pulvérisée.

### 5.2. Dangers particuliers résultant de la substance ou du mélange

| | |
|---|---|
| **Incompatibilité au feu** | Non connu. |

### 5.3. Conseils aux pompiers

| | |
|---|---|
| **Lutte Incendie** | Risque léger en cas d'exposition à la chaleur, au feu et aux oxydants.<br>▸ Utiliser des procédures d'incendie adaptées à la zone environnante.<br>▸ **NE PAS** approcher des conteneurs susceptibles d'être chauds.<br>▸ Refroidir les conteneurs exposés au feu en pulvérisant de l'eau à partir d'un lieu protégé.<br>▸ Si cela peut se faire sans danger, dégager les conteneurs de la zone de propagation du feu.<br>▸ Les équipements doivent être complètement décontaminés après utilisation. |
| **Risque D'Incendie/Explosion** | ▸ Le matériel n'est pas combustible d'emblée dans des conditions normales.<br>▸ Cependant, il se décomposera en cas d'incendie et les composés organiques pourraient brûler.<br>▸ Il ne s'agit pas d'un risque de feu majeur.<br>▸ La chaleur peut entraîner l'expansion ou la décomposition ainsi qu'une explosion des récipients.<br>▸ La décomposition due à la chaleur peut engendrer des fumées toxiques de monoxyde de carbone (CO).<br>▸ Peut émettre des fumées âcres. |

## SECTION 6 MESURES À PRENDRE EN CAS DE DISPERSION ACCIDENTELLE

### 6.1. Précautions individuelles, équipement de protection et procédures d'urgence

Voir l'article 8

### 6.2. Précautions pour la protection de l'environnement

Voir section 12

### 6.3. Méthodes et matériel de confinement et de nettoyage

| | |
|---|---|
| **Eclaboussures Mineures** | Nettoyer immédiatement toutes les éclaboussures.<br>Éviter tout contact avec la peau et les yeux.<br>Placer dans des conteneurs adaptés à l'enlèvement. |
| **Eclaboussures Majeures** | ▸ Nettoyer les éclaboussures immédiatement.<br>▸ Porter des vêtements de protection, des lunettes de sécurité, un masque à poussière, des gants.<br>▸ Sécuriser la charge s'il est sûr de le faire.<br>▸ Collecter le produit récupérable.<br>▸ Utiliser des procédures de nettoyage à sec et éviter de générer de la poussière.<br>▸ Aspirer.<br>▸ De l'eau peut être utilisée pour prévenir la formation de poussière.<br>▸ Collecter le produit restant dans des containers avec une fermeture pour une élimination.<br>▸ Rincer la zone avec de l'eau. |

### 6.4. Référence à d'autres sections

Le conseil sur l'équipement de protection individuel est contenu dans la rubrique 8 de la FDS.

**Continued...**

## SECTION 7 MANIPULATION ET STOCKAGE

### 7.1. Précautions à prendre pour une manipulation sans danger

| | |
|---|---|
| **Manipulation Sure** | Utiliser des bonnes pratiques de sécurité au travail. Suivre les recommandations de stockage et de manipulation du fabricant contenues dans la FDS.<br>Éviter tout dommage physique aux conteneurs. |
| **Protection anti- Feu et explosion** | Voir Section 5 |
| **Autres Données** | ▸ Ne pas stocker avec des produits incompatibles.<br>▸ Garder au sec.<br>▸ Stocker à l'abri.<br>▸ Protéger les conteneurs contre les dommages physiques.<br>▸ Suivre les recommandations de stockage et de manipulation du fabricant contenues dans la FDS.<br>Stocker à l'abri du soleil.<br>Stocker à l'abri de la chaleur et de flammes. |

### 7.2. Conditions d'un stockage sûr, y compris d'éventuelles incompatibilités

| | |
|---|---|
| **Container adapté** | ▸ **NE** ré emballez **PAS**. Utilisez uniquement les récipients fournis par le fabricant. |
| **Incompatibilite de Stockage** | Eviter les acides forts. |

### 7.3. Utilisation(s) finale(s) particulière(s)

Voir section 1.2

## SECTION 8 CONTRÔLES DE L'EXPOSITION/PROTECTION INDIVIDUELLE

### 8.1. Paramètres de contrôle

**NIVEAU SANS EFFET DÉRIVÉ (DNEL)**

Pas Disponible

**PRÉVISIBLE SANS EFFET (PNEC)**

Pas Disponible

**VALEURS LIMITES D'EXPOSITION PROFESSIONNELLE (VLEP)**

**DONNEES SUR LES INGREDIENTS**

| Source | Composant | Nom du produit | VME | STEL | pic | Notes |
|---|---|---|---|---|---|---|
| La France des Valeurs limites d'Exposition Professionnelle - VLE/VME (français) | graphite | Graphite | 2 mg/m3 | Pas Disponible | Pas Disponible | (TWA (a));(VME mg/m3 ( )(a)) |
| L'Union européenne (UE) directive 98/24/CE du Conseil relative à la protection de la santé et la sécurité des travailleurs contre les risques liés à des agents chimiques sur le lieu de travail - Annexe I: Liste des Reliure Valeurs limites d'exposition (en anglais) | plomb | Inorganic lead and it's compounds | 0,15 mg/m3 | Pas Disponible | Pas Disponible | Pas Disponible |
| La France des Valeurs limites d'Exposition Professionnelle - VLE/VME (français) | plomb | Plomb métallique et composés, en Pb | 0,1 mg/m3 | Pas Disponible | Pas Disponible | Pas Disponible |
| La France des Valeurs limites d'Exposition Professionnelle - VLE/VME (français) | plomb | Cadmium et composés,en Cd | 0,05 mg/m3 | Pas Disponible | Pas Disponible | Pas Disponible |
| La France des Valeurs limites d'Exposition Professionnelle - VLE/VME (français) | mercure | Mercure et composés bivalents du mercure, y compris l'oxyde de mercure et le chlorure de mercurique | 0,02 mg/m3 | Pas Disponible | Pas Disponible | Pas Disponible |
| Directive 2009/161/UE de la Commission du 17 décembre 2009 établissant une troisième liste de valeurs limites indicatives d'exposition professionnelle en application de la directive 98/24/CE du Conseil et portant modification de la directive 2000/39/CE de la Commission | mercure | Mercure et composés inorganiques bivalents du mercure, y compris l'oxyde de mercure et le chlorure mercurique (mesurés comme mercure) ( 7 ) | 0,02 mg/m3 | Pas Disponible | Pas Disponible | Pas Disponible |
| L'Union européenne (UE) directive 98/24/CE du Conseil relative à la protection de la santé et la sécurité des travailleurs contre les risques liés à des agents chimiques sur le lieu de travail - Annexe I: Liste des Reliure Valeurs limites d'exposition (en anglais) | plomb | Inorganic lead and it's compounds | 0,15 mg/m3 | Pas Disponible | Pas Disponible | Pas Disponible |

**Continued...**

| | | | | | | |
|---|---|---|---|---|---|---|
| La France des Valeurs limites d'Exposition Professionnelle - VLE/VME (français) | plomb | Plomb métallique et composés, en Pb | 0,1 mg/m3 | Pas Disponible | Pas Disponible | Pas Disponible |
| La France des Valeurs limites d'Exposition Professionnelle - VLE/VME (français) | plomb | Cadmium et composés,en Cd | 0,05 mg/m3 | Pas Disponible | Pas Disponible | Pas Disponible |
| La France des Valeurs limites d'Exposition Professionnelle - VLE/VME (français) | mercure | Mercure et composés bivalents du mercure, y compris l'oxyde de mercure et le chlorure de mercurique | 0,02 mg/m3 | Pas Disponible | Pas Disponible | Pas Disponible |
| Directive 2009/161/UE de la Commission du 17 décembre 2009 établissant une troisième liste de valeurs limites indicatives d'exposition professionnelle en application de la directive 98/24/CE du Conseil et portant modification de la directive 2000/39/CE de la Commission | mercure | Mercure et composés inorganiques bivalents du mercure, y compris l'oxyde de mercure et le chlorure mercurique (mesurés comme mercure) ( 7 ) | 0,02 mg/m3 | Pas Disponible | Pas Disponible | Pas Disponible |
| L'Union européenne (UE) de la Commission de la Directive 2006/15/CE du conseil établissant une deuxième liste indicative des valeurs limites d'exposition professionnelle (loelv) | chrome | Chromium Metal, Inorganic Chromium (II) Compounds and Inorganic Chromium (III) Compounds (insoluble) | 2 mg/m3 | Pas Disponible | Pas Disponible | Pas Disponible |
| L'Union européenne (UE) de la Commission de la Directive 2006/15/CE du conseil établissant une deuxième liste indicative des valeurs limites d'exposition professionnelle (loelv) (en espagnol) | chrome | Cromo metßlico, compuestos inorgßnicos de cromo (II) y compuestos inorgßnicos de cromo (III) (insolubles) | 2 mg/m3 | Pas Disponible | Pas Disponible | Pas Disponible |
| La France des Valeurs limites d'Exposition Professionnelle - VLE/VME (français) | chrome | Chrome (métal), composés de chrome inorganiques (II) et composés de chrome inorganiques (insolubles) (III) | 2 mg/m3 | Pas Disponible | Pas Disponible | Pas Disponible |
| UE Liste récapitulative des indicatifs Valeurs limites d'exposition (VLIEP) | chrome | Chromium Metal, Inorganic Chromium (II) Compounds and Inorganic Chromium (III) Compounds (insoluble) | 2 mg/m3 | Pas Disponible | Pas Disponible | Pas Disponible |
| La France des Valeurs limites d'Exposition Professionnelle - VLE/VME (français) | cadmium | Cadmium et composés,en Cd | 0,05 mg/m3 | Pas Disponible | Pas Disponible | Pas Disponible |

**LIMITES D'URGENCE**

| Composant | Nom du produit | TEEL-1 | TEEL-2 | TEEL-3 |
|---|---|---|---|---|
| carbonate-d'éthylène | Glycol carbonate; (Ethylene carbonate) | 30 mg/m3 | 330 mg/m3 | 2000 mg/m3 |
| graphite | Graphite; (Mineral carbon) | 2 mg/m3 | 2 mg/m3 | 95 mg/m3 |
| plomb | Lead | 0.15 mg/m3 | 120 mg/m3 | 700 mg/m3 |
| mercure | Mercury vapor | 0.15 mg/m3 | Pas Disponible | Pas Disponible |
| plomb | Lead | 0.15 mg/m3 | 120 mg/m3 | 700 mg/m3 |
| mercure | Mercury vapor | 0.15 mg/m3 | Pas Disponible | Pas Disponible |
| chrome | Chromium | 1.5 mg/m3 | 17 mg/m3 | 99 mg/m3 |
| cadmium | Cadmium | Pas Disponible | Pas Disponible | Pas Disponible |

| Composant | IDLH originale | IDLH révisé |
|---|---|---|
| dioxyde-de-cobalt-et-de-lithium | Pas Disponible | Pas Disponible |
| hexafluorophosphate(1-) de lithium | Pas Disponible | Pas Disponible |
| carbonate-d'éthylène | Pas Disponible | Pas Disponible |
| chain carbonate | Pas Disponible | Pas Disponible |
| graphite | N.E. mg/m3 / N.E. ppm | 1,250 mg/m3 |
| plomb | 700 mg/m3 | 100 mg/m3 |
| mercure | 10 mg/m3 / 28 mg/m3 | 2 mg/m3 / 10 mg/m3 |
| plomb | 700 mg/m3 | 100 mg/m3 |
| mercure | 10 mg/m3 / 28 mg/m3 | 2 mg/m3 / 10 mg/m3 |
| chrome | N.E. mg/m3 / N.E. ppm | 250 mg/m3 |
| cadmium | 50 mg/m3 / 9 mg/m3 | 9 mg/m3 / 9 [Unch] mg/m3 |
| bisphenol A/ phosgene polymer | Pas Disponible | Pas Disponible |
| flame retardant | Pas Disponible | Pas Disponible |
| elastomer | Pas Disponible | Pas Disponible |

**Continued...**

**DONNÉES SUR LES MATÉRIAUX**

### 8.2. Contrôles de l'exposition

| | |
|---|---|
| **8.2.1. Contrôle d'ingéniérie approprié** | Aucun dans des conditions de fonctionnement normales.<br><br>Fournir une aération adéquate dans l'entrepôt ou les espaces fermés de stockage. |
| **8.2.2. Protection Individuelle** |  |
| **Protection des yeux/du visage.** | Aucun dans des conditions opérationnelles normales.<br>**AUTREMENT :**<br>▸ Lunettes de protection. |
| **Protection de la peau** | Voir protection Main ci-dessous |
| **Protection des mains / pieds** | Aucun dans des conditions opérationnelles normales.<br>**AUTREMENT :**<br>▸ Gants caoutchouc. |
| **Protection corporelle** | Voir Autre protection ci-dessous |
| **Autres protections** | Aucun dans des conditions opérationnelles normales.<br>**AUTREMENT :**<br>▸ Protections.<br>▸ Tablier en PVC.<br>▸ Une combinaison de protection en PVC peut s'avérer nécessaire si l'exposition est grave.<br>▸ Unité de nettoyage pour les yeux.<br>▸ Assurez-vous qu'il y ait un accès libre à une douche de sécurité. |
| **Les risques thermiques** | Pas Disponible |

### Protection respiratoire

Filtre de type AHG-P de capacité suffisante (AS / NZS 1716 et 1715, EN 143:2000 et 149:2001, ANSI Z88 ou équivalent national)

Dans le cas où la concentration en gaz/particules en suspension dans la zone respirable approche ou excède "le standard d'exposition" (ou SE), une protection respiratoire est requise.
Le degrés de protection varie avec le type de couverture du masque et la classe du filtre ; la nature de la protection varie en fonction du type de filtre.

| Facteur de protection | Demi-masque respiratoire | Respirateur intégral | Masque à adduction d'air |
|---|---|---|---|
| 10 x ES | AHG-AUS P2 | - | AHG-PAPR-AUS P2 |
| 50 x ES | - | AHG-AUS P2 | - |
| 100 x ES | - | AHG-2 P2 | AHG-PAPR-2 P2 ^ |

^ - Intégral

### 8.2.3. Contrôle d'exposition lié à la protection de l'environnement

Voir section 12

## SECTION 9 PROPRIÉTÉS PHYSIQUES ET CHIMIQUES

### 9.1. Informations sur les propriétés physiques et chimiques essentielles

| | |
|---|---|
| **Aspect** | Pas Disponible |

| | | | |
|---|---|---|---|
| **État Physique** | divisé solide | **Densité relative (Water = 1)** | Pas Disponible |
| **Odeur** | Pas Disponible | **Coefficient de partition n-octanol / eau** | Pas Disponible |
| **Seuil pour les odeurs** | Pas Disponible | **Température d'auto-allumage (°C)** | Pas Disponible |
| **pH (comme fourni)** | Pas Disponible | **Température de décomposition** | Pas Disponible |
| **Point de fusion / point de congélation (° C)** | Pas Disponible | **Viscosité (cSt)** | Pas Disponible |
| **Point d'ébullition initial et plage d'ébullition (° C)** | Pas Disponible | **Poids Moléculaire (g/mol)** | Sans Objet |
| **Point d'éclair (°C)** | Pas Disponible | **goût** | Pas Disponible |
| **Taux d'évaporation** | Pas Disponible | **Propriétés explosives** | Pas Disponible |
| **Inflammabilité** | Pas Disponible | **Propriétés oxydantes** | Pas Disponible |
| **Limite supérieure d'explosivité** | Pas Disponible | **La tension de surface (dyn/cm or mN/m)** | Sans Objet |
| **Limite inférieure d'explosivité (LIE)** | Pas Disponible | **Composé volatile (%vol)** | Pas Disponible |
| **Pression de vapeur (kPa)** | Pas Disponible | **Groupe du Gaz** | Pas Disponible |
| **hydrosolubilité (g/L)** | Immiscible | **pH en solution (1%)** | Pas Disponible |
| **Densité de vapeur (Air = 1)** | Pas Disponible | **VOC g/L** | Pas Disponible |

**Continued...**

### 9.2. Autres informations

Pas Disponible

## SECTION 10 STABILITÉ ET RÉACTIVITÉ

| | |
|---|---|
| **10.1.Réactivité** | Voir section 7.2 |
| **10.2.Stabilité chimique** | Le produit est considéré comme stable et une polymérisation dangereuse ne se produira pas |
| **10.3. Possibilité de réactions dangereuses** | Voir section 7.2 |
| **10.4. Conditions à éviter** | Voir section 7.2 |
| **10.5. Matières incompatibles** | Voir section 7.2 |
| **10.6. Produits de décomposition dangereux** | Voir section 5.3 |

## SECTION 11 INFORMATIONS TOXICOLOGIQUES

### 11.1. Informations sur les effets toxicologiques

| | |
|---|---|
| **Inhalé** | Pas normalement un risque du à la forme physique du produit.<br>\|Vapor generated from burning batteries may cause throat irritation. |
| **Ingestion** | Considérée comme une voie d'entrée improbable dans des environnements industriels/commerciaux.<br>Une ingestion accidentelle du matériel peut s'avérer dangereuse; selon des expériences sur des animaux, l'ingestion de moins de 150 grammes serait fatale ou nuirait gravement à la santé de l'individu.<br>Des empoisonnements apparaissent rarement après une administration orale de sels de manganèse car ils sont faiblement absorbés par l'intestin. |
| **Contact avec la peau** | Pas normalement un risque du à la forme physique du produit.<br>\|Battery contents cause irritation upon contact with the skin. |
| **Yeux** | Pas normalement un risque du à la forme physique du produit.<br>\|Eye contact with the content of an open battery can cause severe eye irritation. |
| **Chronique** | Pas normalement un risque du à la forme physique du produit.<br>\|Since chemicals are contained in a sealed can, there are no hazards. Exposure to battery content causes severe eye irritation, skin irritation and harmful effect if swallowed. |

| | TOXICITÉ | IRRITATION |
|---|---|---|
| **Lithium-ion battery** | Pas Disponible | Pas Disponible |
| **dioxyde-de-cobalt-et-de-lithium** | Pas Disponible | Pas Disponible |
| **hexafluorophosphate(1-) de lithium** | Orale (rat) LD 50: 50-300 mg/kg[1] | Pas Disponible |
| **carbonate-d'éthylène** | Dermique (rat) LD50: >2000 mg/kg[1]<br>Orale (rat) LD 50: >2000 mg/kg[1] | [CCInfo]*<br>Eye (rabbit): 20 mg - mild<br>Skin (rabbit): 660 mg - moderate |
| **graphite** | Inhalatoire (rat) LC50: >2 mg/L4 h[1]<br>Orale (rat) LD 50: >2000 mg/kg**[2] | Pas Disponible |
| **plomb** | Dermique (rat) LD50: >2000 mg/kg[1]<br>Inhalatoire (rat) LC50: >5.05 mg/l4 h[1]<br>Orale (rat) LD 50: >2000 mg/kg[1] | Nil Reported |
| **mercure** | Orale (rat) LD 50: >9.2 mg/kg[1] | (Source: RTECS)<br>Nil reported |
| **plomb** | Dermique (rat) LD50: >2000 mg/kg[1]<br>Inhalatoire (rat) LC50: >5.05 mg/l4 h[1]<br>Orale (rat) LD 50: >2000 mg/kg[1] | Nil Reported |

**Continued...**

| | | |
|---|---|---|
| **mercure** | **TOXICITÉ** | **IRRITATION** |
| | Orale (rat) LD 50: >9.2 mg/kg[1] | (Source: RTECS) |
| | | Nil reported |
| **chrome** | **TOXICITÉ** | **IRRITATION** |
| | Pas Disponible | Pas Disponible |
| **cadmium** | **TOXICITÉ** | **IRRITATION** |
| | Inhalatoire (lapin) LC50: >0.0224 mg/L15 min[1] | Nil reported |
| | Inhalatoire (rat) LC50: 0.025 mg/L/30m[2] | |
| | Inhalatoire (singe) CL50: 0.03 mg/L15 min[1] | |
| | Inhalatoire (singe) CL50: 0.0467 mg/L15 min[1] | |
| | Inhalatoire (singe) CL50: 0.204 mg/L15 min[1] | |
| | Inhalatoire (singe) CL50: 0.23 mg/L15 min[1] | |
| | Inhalatoire (singe) CL50: 0.94 mg/L15 min[1] | |
| | Inhalatoire (souris) LC50: >0.00902 mg/L15 min[1] | |
| | Orale (rat) LD 50: >63-<259 mg/kg[1] | |
| **bisphenol A/ phosgene polymer** | **TOXICITÉ** | **IRRITATION** |
| | Pas Disponible | Pas Disponible |
| ***Légende:*** | *1 Valeur obtenue substances Europe de l'ECHA enregistrés de -.. Toxicité aiguë 2 Valeur obtenue à partir de la fiche signalétique du fabricant, sauf les données spécifiées soient extraites du RTECS - Registre des effets toxiques des substances chimiques* | |

| | |
|---|---|
| **CARBONATE-D'ÉTHYLÈNE** | Les symptômes semblables à l'asthme peuvent durer des mois ou même des années après que l'exposition air cessée. Ceci peut être du à une condition non-allergique connue comme syndrome réactif de dysfonctionnement des voies respiratoires (RADS) qui peut apparaître à la suite d'une exposition à des forts niveaux de composés fortement irritants. Les critères clés pour le diagnostique d'un RADS incluent l'absence de maladie respiratoire précédente, chez un individu non-atypique, avec l'apparition abrupte de symptômes semblables à l'asthme dans les minutes ou les heures à une exposition connue à l'irritant. Un modèle de respiration réversible, au spiromètre, avec la présence modérée à importante d'hyperactivité des bronches au cours d'un test à la méthacholinium et l'absence d'une inflammation lymphatique minimale, sans éosinophilie, ont également été inclus dans les critères pour le diagnostique d'un RADS.<br>Le RADS (ou asthme) suivant une inhalation irritante est un désordre rare avec des taux reliés à la concentration et à la durée de l'exposition à la substance irritante. D'un autre côté, une bronchite industrielle est un désordre qui peut apparaître en tant que résultat d'une exposition à de fortes concentrations de substances irritantes (souvent particulaire dans la nature) et est complètement réversible après que les expositions ont cessé. Le désordre est caractérisé par une dyspnée, une toux et une production de mucus.<br>Le produit peut produire une importante irritation des yeux provoquant une inflammation importante. Une exposition prolongée ou répétée aux irritants peut produire des conjonctivites.<br>Le produit peut causer une irritation de la peau après une exposition prolongée ou répétée et peut produire au contact de la peau des rougeurs, des tuméfactions, une production de vésicules, la formation d'écailles et un épaississement de la peau. |
| **CHROME** | Aucune donnée significative de toxicologie aiguë identifiée dans la littérature.<br>Cette substance a été classée par l'IARC comme appartenant au Groupe 3 : NON classable par rapport à son pouvoir cancérigène pour les humains.<br>Les preuves de cancérogénicité peuvent être inadéquates ou limitées à des tests sur les animaux.<br>Gastrointestinal tumours, lymphoma, musculoskeletal tumours and tumours at site of application recorded. |
| **DIOXYDE-DE-COBALT-ET-DE-LITHIUM & BISPHENOL A/ PHOSGENE POLYMER** | Aucune donnée significative de toxicologie aiguë identifiée dans la littérature. |
| **HEXAFLUOROPHOSPHATE(1-) DE LITHIUM & GRAPHITE** | Les symptômes semblables à l'asthme peuvent durer des mois ou même des années après que l'exposition air cessée. Ceci peut être du à une condition non-allergique connue comme syndrome réactif de dysfonctionnement des voies respiratoires (RADS) qui peut apparaître à la suite d'une exposition à des forts niveaux de composés fortement irritants. Les critères clés pour le diagnostique d'un RADS incluent l'absence de maladie respiratoire précédente, chez un individu non-atypique, avec l'apparition abrupte de symptômes semblables à l'asthme dans les minutes ou les heures à une exposition connue à l'irritant. Un modèle de respiration réversible, au spiromètre, avec la présence modérée à importante d'hyperactivité des bronches au cours d'un test à la méthacholinium et l'absence d'une inflammation lymphatique minimale, sans éosinophilie, ont également été inclus dans les critères pour le diagnostique d'un RADS.<br>Le RADS (ou asthme) suivant une inhalation irritante est un désordre rare avec des taux reliés à la concentration et à la durée de l'exposition à la substance irritante. D'un autre côté, une bronchite industrielle est un désordre qui peut apparaître en tant que résultat d'une exposition à de fortes concentrations de substances irritantes (souvent particulaire dans la nature) et est complètement réversible après que les expositions ont cessé. Le désordre est caractérisé par une dyspnée, une toux et une production de mucus.<br>Aucune donnée significative de toxicologie aiguë identifiée dans la littérature. |
| **PLOMB** | WARNING: Lead is a cumulative poison and has the potential to cause |
| **PLOMB** | abortion and intellectual impairment to unborn children of |
| **PLOMB** | pregnant workers. |
| **MERCURE** | Les symptômes semblables à l'asthme peuvent durer des mois ou même des années après que l'exposition air cessée. Ceci peut être du à une condition non-allergique connue comme syndrome réactif de dysfonctionnement des voies respiratoires (RADS) qui peut apparaître à la suite d'une exposition à des forts niveaux de composés fortement irritants. Les critères clés pour le diagnostique d'un RADS incluent l'absence de maladie respiratoire précédente, chez un individu non-atypique, avec l'apparition abrupte de symptômes semblables à l'asthme dans les minutes ou les heures à une exposition connue à l'irritant. Un modèle de respiration réversible, au spiromètre, avec la présence modérée à importante d'hyperactivité des bronches au cours d'un test à la méthacholinium et l'absence d'une inflammation lymphatique minimale, sans éosinophilie, ont également été inclus dans les critères pour le diagnostique d'un RADS.<br>Le RADS (ou asthme) suivant une inhalation irritante est un désordre rare avec des taux reliés à la concentration et à la durée de l'exposition à la substance irritante. D'un autre côté, une bronchite industrielle est un désordre qui peut apparaître en tant que résultat d'une exposition à de fortes concentrations de substances irritantes (souvent particulaire dans la nature) et est complètement réversible après que les expositions ont cessé. Le désordre est caractérisé par une dyspnée, une toux et une production de mucus. |

**Continued...**

| | |
|---|---|
| **MERCURE** | Animal studies have shown that mercury may be a reproductive effector. |

| | | | |
|---|---|---|---|
| **toxicité aiguë** | ⊘ | **Cancérogénicité** | ⊘ |
| **Irritation / corrosion** | ⊘ | **reproducteur** | ⊘ |
| **Lésions oculaires graves / irritation** | ⊘ | **STOT - exposition unique** | ⊘ |
| **Sensibilisation respiratoire ou cutanée** | ⊘ | **STOT - exposition répétée** | ⊘ |
| **Mutagénéïté** | ⊘ | **risque d'aspiration** | ⊘ |

***Légende:*** ✗ *– Données disponibles, mais ne remplit pas les critères de classification*
✓ *– Données nécessaires à la classification disponible*
⊘ *– Données non disponibles pour faire la classification*

## SECTION 12 INFORMATIONS ÉCOLOGIQUES

### 12.1. Toxicité

| Composant | ENDPOINT | Durée de l'essai (heures) | espèce | Valeur | source |
|---|---|---|---|---|---|
| dioxyde-de-cobalt-et-de-lithium | LC50 | 96 | Poisson | 1.406mg/L | 2 |
| dioxyde-de-cobalt-et-de-lithium | EC50 | 48 | crustacés | 2.618mg/L | 2 |
| dioxyde-de-cobalt-et-de-lithium | EC50 | 504 | crustacés | 0.012mg/L | 2 |
| dioxyde-de-cobalt-et-de-lithium | EC50 | 72 | Sans Objet | 0.144mg/L | 2 |
| dioxyde-de-cobalt-et-de-lithium | NOEC | 168 | Sans Objet | 0.0018mg/L | 2 |
| hexafluorophosphate(1-) de lithium | LC50 | 96 | Poisson | 42mg/L | 2 |
| hexafluorophosphate(1-) de lithium | EC50 | 528 | Poisson | 1mg/L | 2 |
| hexafluorophosphate(1-) de lithium | NOEC | 528 | Poisson | 0.2mg/L | 2 |
| hexafluorophosphate(1-) de lithium | EC50 | 48 | crustacés | 98mg/L | 2 |
| hexafluorophosphate(1-) de lithium | EC50 | 96 | Sans Objet | 43mg/L | 2 |
| carbonate-d'éthylène | EC50 | 96 | Sans Objet | 17.388mg/L | 3 |
| carbonate-d'éthylène | LC50 | 96 | Poisson | 238.065mg/L | 3 |
| graphite | LC50 | 96 | Poisson | >100mg/L | 2 |
| graphite | EC50 | 48 | crustacés | >=38.4- <=67.6mg/L | 2 |
| graphite | NOEC | 672 | crustacés | >=0.58- <=10mg/L | 2 |
| graphite | EC50 | 72 | Sans Objet | 19mg/L | 2 |
| graphite | EC50 | 72 | Sans Objet | 7.2mg/L | 2 |
| plomb | BCFD | 8 | Poisson | 4.324mg/L | 4 |
| plomb | NOEC | 672 | Poisson | 0.00003mg/L | 4 |
| plomb | LC50 | 96 | Poisson | 0.0079mg/L | 2 |
| plomb | EC50 | 48 | crustacés | 0.029mg/L | 2 |
| plomb | EC50 | 48 | Sans Objet | 0.0217mg/L | 2 |
| plomb | EC50 | 72 | Sans Objet | 0.0205mg/L | 2 |
| mercure | BCF | 720 | Poisson | 0.001mg/L | 4 |
| mercure | EC50 | 72 | Sans Objet | 0.0025mg/L | 4 |
| mercure | LC50 | 96 | Poisson | 0.004mg/L | 4 |
| mercure | EC50 | 240 | Poisson | 0.0003mg/L | 5 |
| mercure | EC50 | 48 | crustacés | 0.0003mg/L | 2 |
| mercure | NOEC | 2688 | crustacés | 0.00025mg/L | 2 |
| plomb | BCFD | 8 | Poisson | 4.324mg/L | 4 |
| plomb | NOEC | 672 | Poisson | 0.00003mg/L | 4 |
| plomb | LC50 | 96 | Poisson | 0.0079mg/L | 2 |
| plomb | EC50 | 48 | crustacés | 0.029mg/L | 2 |
| plomb | EC50 | 48 | Sans Objet | 0.0217mg/L | 2 |
| plomb | EC50 | 72 | Sans Objet | 0.0205mg/L | 2 |
| mercure | BCF | 720 | Poisson | 0.001mg/L | 4 |
| mercure | EC50 | 72 | Sans Objet | 0.0025mg/L | 4 |

**Continued...**

| | | | | | |
|---|---|---|---|---|---|
| **mercure** | LC50 | 96 | Poisson | 0.004mg/L | 4 |
| **mercure** | EC50 | 240 | Poisson | 0.0003mg/L | 5 |
| **mercure** | EC50 | 48 | crustacés | 0.0003mg/L | 2 |
| **mercure** | NOEC | 2688 | crustacés | 0.00025mg/L | 2 |
| **chrome** | BCF | 1440 | Sans Objet | 0.0495mg/L | 4 |
| **chrome** | EC50 | 72 | Sans Objet | 0.104mg/L | 4 |
| **chrome** | LC50 | 96 | Poisson | 13.9mg/L | 4 |
| **chrome** | NOEC | 672 | Poisson | 0.00019mg/L | 4 |
| **chrome** | EC50 | 48 | crustacés | 0.0225mg/L | 5 |
| **chrome** | EC50 | 48 | crustacés | 0.0245mg/L | 5 |
| **cadmium** | BCF | 960 | Poisson | 500mg/L | 4 |
| **cadmium** | LC50 | 96 | Poisson | 0.001mg/L | 4 |
| **cadmium** | NOEC | 168 | Poisson | 0.00001821mg/L | 4 |
| **cadmium** | EC50 | 336 | crustacés | 0.00065mg/L | 5 |
| **cadmium** | EC50 | 48 | crustacés | 0.0033mg/L | 5 |
| **cadmium** | EC50 | 72 | Sans Objet | 0.018mg/L | 2 |
| ***Légende:*** | *Extrait de 1. Données de toxicité de IUCLID 2. Substances enregistrées par ECHA en Europe - informations écotoxicologiques - Toxicité aquatique 3. EPIWIN Suite V3.12 - Données de toxicité aquatique (estimées) 4. Base de données ECOTOX de l'Agence de protection de l'environnement (EPA) des États-Unis- Données de toxicité aquatique 5. Données d'évaluation des risques aquatiques ECETOC 6. NITE (Japon) - Données de bioconcentration 7. METI (Japon) - Données de bioconcentration* | | | | |

Ne pas laisser pénétrer dans la nappe phréatique, les eaux ou les canalisations.

### 12.2. Persistance et dégradabilité

| Composant | Persistance: Eau/Sol | Persistance: Air |
|---|---|---|
| carbonate-d'éthylène | HAUT | HAUT |

### 12.3. Potentiel de bioaccumulation

| Composant | Bioaccumulation |
|---|---|
| carbonate-d'éthylène | BAS (LogKOW = -0.3388) |

### 12.4. Mobilité dans le sol

| Composant | Mobilité |
|---|---|
| carbonate-d'éthylène | BAS (KOC = 9.168) |

### 12.5.Résultats des évaluations PBT et VPVB

| | P | B | T |
|---|---|---|---|
| Des données disponibles | Pas Disponible | Pas Disponible | Pas Disponible |
| Critères PBT remplies? | Pas Disponible | Pas Disponible | Pas Disponible |

### 12.6. Autres effets néfastes

Aucune donnée disponible

## SECTION 13 CONSIDÉRATIONS RELATIVES À L'ÉLIMINATION

### 13.1. Méthodes de traitement des déchets

| | |
|---|---|
| **Elimination du produit / emballage** | Consulter les autorités de gestion des déchets pour savoir où les disposer.<br>Enfouir les résidus dans une décharge autorisée. |
| **Options de traitement des déchets** | Pas Disponible |
| **Options d'élimination par les égouts** | Pas Disponible |

## SECTION 14 INFORMATIONS RELATIVES AU TRANSPORT

### Etiquettes nécessaires

| | |
|---|---|
| |  |
| **Polluant marin** | aucun |

### Transport par terre (ADR)

**Continued...**

| | |
|---|---|
| **14.1.Numéro ONU** | 3480 |
| **14.2.Groupe d'emballage** | II |
| **14.3.Nom d'expédition des Nations unies** | Sans Objet |
| **14.4.Dangers pour l'environnement** | Sans Objet |
| **14.5. Classe(s) de danger pour le transport** | classe: 9<br>Risque Secondaire: Sans Objet |
| **14.6. Précautions particulières à prendre par l'utilisateur** | Identification du risque (Kemler): Sans Objet<br>Code de classification: M4<br>Etiquette de danger: 9<br>Dispositions particulières: 188 230 310 348 376 377 636<br>quantité limitée: 0 |

**Transport aérien (ICAO-IATA / DGR)**

| | |
|---|---|
| **14.1. Numéro ONU** | 3480 |
| **14.2. Groupe d'emballage** | II |
| **14.3. Nom d'expédition des Nations unies** | Sans Objet |
| **14.4. Dangers pour l'environnement** | Sans Objet |
| **14.5. Classe(s) de danger pour le transport** | Classe ICAO/IATA: 9<br>Sous-risque ICAO/IATA: Sans Objet<br>Code ERG: 9F |
| **14.6. Précautions particulières à prendre par l'utilisateur** | Dispositions particulières: A88 A99 A154 A164 A183<br>Instructions d'emballage pour cargo uniquement: See 965<br>Maximum Qté / Paquet pour cargo uniquement: See 965<br>Instructions d'emballage pour cargo et vaisseaux passagers: See 965<br>Quantité maximale Passager et Cargo / Paquet: See 965<br>Qté de paquets limités dans avion passager et de cargaison: Forbidden<br>Quantité Limitée Quantité maximale Passager et Cargo / Paquet: Forbidden |

**Transport Maritime (IMDG-Code / GGVSee)**

| | |
|---|---|
| **14.1. Numéro ONU** | 3480 |
| **14.2. Groupe d'emballage** | II |
| **14.3. Nom d'expédition des Nations unies** | Sans Objet |
| **14.4. Dangers pour l'environnement** | Sans Objet |
| **14.5. Classe(s) de danger pour le transport** | Classe IMDG: 9<br>IMDG Sous-risque: Sans Objet |
| **14.6. Précautions particulières à prendre par l'utilisateur** | N° EMS: F-A, S-I<br>Dispositions particulières: 188 230 310 348 376 377<br>Quantités limitées: 0 |

**Le transport fluvial (ADN)**

| | |
|---|---|
| **14.1. Numéro ONU** | 3480 |
| **14.2. Groupe d'emballage** | II |
| **14.3. Nom d'expédition des Nations unies** | Sans Objet |
| **14.4. Dangers pour l'environnement** | Sans Objet |
| **14.5. Classe(s) de danger pour le transport** | 9 \| Sans Objet |
| **14.6. Précautions particulières à prendre par l'utilisateur** | Code de classification: M4<br>Dispositions particulières: 188; 230; 310; 348; 376; 377; 636<br>Quantités Limitées: 0<br>Équipement requis: PP |

**Continued...**

| | | |
|---|---|---|
| | Feu cônes nombre | 0 |

**Transport en vrac conformément à l'annexe II de la convention Marpol et au recueil IBC**

Sans Objet

## SECTION 15 INFORMATIONS RÉGLEMENTAIRES

### 15.1. Réglementations/législation particulières à la substance ou au mélange en matière de sécurité, de santé et d'environnement

**DIOXYDE-DE-COBALT-ET-DE-LITHIUM(12190-79-3) EST DISPONIBLE DANS LES TEXTES RÉGLEMENTAIRES SUIVANTS**

Agence Internationale pour la Recherche sur le Cancer (CIRC) - Agents classés par les Monographies du CIRC
Inventaire européen des substances chimiques douanes ECICS (en anglais)
Union européenne - Inventaire Européen des Substances Chimiques Commerciales Existantes (EINECS) (en anglais)

**HEXAFLUOROPHOSPHATE(1-) DE LITHIUM(21324-40-3) EST DISPONIBLE DANS LES TEXTES RÉGLEMENTAIRES SUIVANTS**

Inventaire européen des substances chimiques douanes ECICS (en anglais)
Union européenne - Inventaire Européen des Substances Chimiques Commerciales Existantes (EINECS) (en anglais)

**CARBONATE-D'ÉTHYLÈNE(96-49-1) EST DISPONIBLE DANS LES TEXTES RÉGLEMENTAIRES SUIVANTS**

Du Règlement REACH (CE) N ° 1907/2006, Annexe XVII - Restrictions à la fabrication, la mise sur le marché et l'utilisation de certaines substances dangereuses, les mélanges et les articles
Inventaire européen des substances chimiques douanes ECICS (en anglais)
Union européenne - Inventaire Européen des Substances Chimiques Commerciales Existantes (EINECS) (en anglais)
UNION européenne Agence Européenne des produits Chimiques (ECHA) Plan d'Action continu Communautaire (CoRAP) Liste des Substances

**GRAPHITE(7782-42-5) EST DISPONIBLE DANS LES TEXTES RÉGLEMENTAIRES SUIVANTS**

Du Règlement REACH (CE) N ° 1907/2006, Annexe XVII - Restrictions à la fabrication, la mise sur le marché et l'utilisation de certaines substances dangereuses, les mélanges et les articles
Inventaire européen des substances chimiques douanes ECICS (en anglais)
La France des Valeurs limites d'Exposition Professionnelle - VLE/VME (français)
Union européenne - Inventaire Européen des Substances Chimiques Commerciales Existantes (EINECS) (en anglais)
UNION européenne Agence Européenne des produits Chimiques (ECHA) Plan d'Action continu Communautaire (CoRAP) Liste des Substances

**PLOMB(7439-92-1) EST DISPONIBLE DANS LES TEXTES RÉGLEMENTAIRES SUIVANTS**

Agence Internationale pour la Recherche sur le Cancer (CIRC) - Agents classés par les Monographies du CIRC
Confédération européenne des syndicats liste prioritaire (CES) pour REACH autorisation
Du Règlement REACH (CE) N ° 1907/2006, Annexe XVII - Restrictions à la fabrication, la mise sur le marché et l'utilisation de certaines substances dangereuses, les mélanges et les articles
Inventaire européen des substances chimiques douanes ECICS (en anglais)
La France des Valeurs limites d'Exposition Professionnelle - VLE/VME (français)
L'Europe industries aérospatiales et de défense Association of Europe (ASD) de mise en œuvre de REACH Groupe de travail prioritaire Liste des substances déclarables (PDSL)
L'Union européenne (UE) à l'Annexe I de la Directive 67/548/CEE relative à la Classification et à l'Étiquetage des Substances Dangereuses - mise à jour par l'ATP: 31
L'Union européenne (UE) directive 98/24/CE du Conseil relative à la protection de la santé et la sécurité des travailleurs contre les risques liés à des agents chimiques sur le lieu de travail - Annexe I: Liste des Reliure Valeurs limites d'exposition (en anglais)
L'Union européenne (UE) Règlement (CE) N ° 1272/2008 relatif à la Classification, à l'Étiquetage et à l'Emballage des Substances et des Mélanges - Annexe VI
Union européenne - Inventaire Européen des Substances Chimiques Commerciales Existantes (EINECS) (en anglais)

**MERCURE(7439-97-6) EST DISPONIBLE DANS LES TEXTES RÉGLEMENTAIRES SUIVANTS**

Agence Internationale pour la Recherche sur le Cancer (CIRC) - Agents classés par les Monographies du CIRC
Directive 2009/161/UE de la Commission du 17 décembre 2009 établissant une troisième liste de valeurs limites indicatives d'exposition professionnelle en application de la directive 98/24/CE du Conseil et portant modification de la directive 2000/39/CE de la Commission
Du Règlement REACH (CE) N ° 1907/2006, Annexe XVII - Restrictions à la fabrication, la mise sur le marché et l'utilisation de certaines substances dangereuses, les mélanges et les articles
Du Règlement REACH (CE) N ° 1907/2006, Annexe XVII (Annexe 6) Toxiques pour la reproduction: catégorie 1B (Tableau 3.1)/catégorie 2 (Tableau 3.2)
Inventaire européen des substances chimiques douanes ECICS (en anglais)
La France des Valeurs limites d'Exposition Professionnelle - VLE/VME (français)
L'Union européenne (UE) à l'Annexe I de la Directive 67/548/CEE relative à la Classification et à l'Étiquetage des Substances Dangereuses - mise à jour par l'ATP: 31
L'Union européenne (UE) l'annexe I de la directive 67/548/CEE sur la classification et l'étiquetage des substances dangereuses (mise à jour par l'ATP: 31) - Substances toxiques pour la reproduction
L'Union européenne (UE) Règlement (CE) N ° 1272/2008 relatif à la Classification, à l'Étiquetage et à l'Emballage des Substances et des Mélanges - Annexe VI
Union européenne - Inventaire Européen des Substances Chimiques Commerciales Existantes (EINECS) (en anglais)

**PLOMB(7439-92-1) EST DISPONIBLE DANS LES TEXTES RÉGLEMENTAIRES SUIVANTS**

Agence Internationale pour la Recherche sur le Cancer (CIRC) - Agents classés par les Monographies du CIRC
Confédération européenne des syndicats liste prioritaire (CES) pour REACH autorisation
Du Règlement REACH (CE) N ° 1907/2006, Annexe XVII - Restrictions à la fabrication, la mise sur le marché et l'utilisation de certaines substances dangereuses, les mélanges et les articles
Inventaire européen des substances chimiques douanes ECICS (en anglais)
La France des Valeurs limites d'Exposition Professionnelle - VLE/VME (français)
L'Europe industries aérospatiales et de défense Association of Europe (ASD) de mise en œuvre de REACH Groupe de travail prioritaire Liste des substances déclarables (PDSL)
L'Union européenne (UE) à l'Annexe I de la Directive 67/548/CEE relative à la Classification et à l'Étiquetage des Substances Dangereuses - mise à jour par l'ATP: 31
L'Union européenne (UE) directive 98/24/CE du Conseil relative à la protection de la santé et la sécurité des travailleurs contre les risques liés à des agents chimiques sur le lieu de travail - Annexe I: Liste des Reliure Valeurs limites d'exposition (en anglais)
L'Union européenne (UE) Règlement (CE) N ° 1272/2008 relatif à la Classification, à l'Étiquetage et à l'Emballage des Substances et des Mélanges - Annexe VI
Union européenne - Inventaire Européen des Substances Chimiques Commerciales Existantes (EINECS) (en anglais)

**MERCURE(7439-97-6) EST DISPONIBLE DANS LES TEXTES RÉGLEMENTAIRES SUIVANTS**

**Continued...**

| | |
|---|---|
| Agence Internationale pour la Recherche sur le Cancer (CIRC) - Agents classés par les Monographies du CIRC | La France des Valeurs limites d'Exposition Professionnelle - VLE/VME (français) |
| Directive 2009/161/UE de la Commission du 17 décembre 2009 établissant une troisième liste de valeurs limites indicatives d'exposition professionnelle en application de la directive 98/24/CE du Conseil et portant modification de la directive 2000/39/CE de la Commission | L'Union européenne (UE) à l'Annexe I de la Directive 67/548/CEE relative à la Classification et à l'Étiquetage des Substances Dangereuses - mise à jour par l'ATP: 31 |
| Du Règlement REACH (CE) N ° 1907/2006, Annexe XVII - Restrictions à la fabrication, la mise sur le marché et l'utilisation de certaines substances dangereuses, les mélanges et les articles | L'Union européenne (UE) l'annexe I de la directive 67/548/CEE sur la classification et l'étiquetage des substances dangereuses (mise à jour par l'ATP: 31) - Substances toxiques pour la reproduction |
| Du Règlement REACH (CE) N ° 1907/2006, Annexe XVII (Annexe 6) Toxiques pour la reproduction: catégorie 1B (Tableau 3.1)/catégorie 2 (Tableau 3.2) | L'Union européenne (UE) Règlement (CE) N ° 1272/2008 relatif à la Classification, à l'Étiquetage et à l'Emballage des Substances et des Mélanges - Annexe VI |
| Inventaire européen des substances chimiques douanes ECICS (en anglais) | Union européenne - Inventaire Européen des Substances Chimiques Commerciales Existantes (EINECS) (en anglais) |

**CHROME(7440-47-3) EST DISPONIBLE DANS LES TEXTES RÉGLEMENTAIRES SUIVANTS**

| | |
|---|---|
| Agence Internationale pour la Recherche sur le Cancer (CIRC) - Agents classés par les Monographies du CIRC | L'Union européenne (UE) de la Commission de la Directive 2006/15/CE du conseil établissant une deuxième liste indicative des valeurs limites d'exposition professionnelle (Ioelv) |
| Confédération européenne des syndicats liste prioritaire (CES) pour REACH autorisation | L'Union européenne (UE) de la Commission de la Directive 2006/15/CE du conseil établissant une deuxième liste indicative des valeurs limites d'exposition professionnelle (Ioelv) (en espagnol) |
| Du Règlement REACH (CE) N ° 1907/2006, Annexe XVII - Restrictions à la fabrication, la mise sur le marché et l'utilisation de certaines substances dangereuses, les mélanges et les articles | UE Liste récapitulative des indicatifs Valeurs limites d'exposition (VLIEP) |
| Inventaire européen des substances chimiques douanes ECICS (en anglais) | Union européenne - Inventaire Européen des Substances Chimiques Commerciales Existantes (EINECS) (en anglais) |
| La France des Valeurs limites d'Exposition Professionnelle - VLE/VME (français) | |

**CADMIUM(7440-43-9) EST DISPONIBLE DANS LES TEXTES RÉGLEMENTAIRES SUIVANTS**

| | |
|---|---|
| Agence européenne des produits chimiques en Europe (ECHA) Candidat Liste des substances extrêmement préoccupantes pour autorisation | L'Union européenne (UE) à l'Annexe I de la Directive 67/548/CEE relative à la Classification et à l'Étiquetage des Substances Dangereuses - mise à jour par l'ATP: 31 |
| Agence Internationale pour la Recherche sur le Cancer (CIRC) - Agents classés par les Monographies du CIRC | L'Union européenne (UE) l'annexe I de la directive 67/548/CEE sur la classification et l'étiquetage des substances dangereuses (mise à jour par l'ATP: 31) - des substances mutagènes |
| Confédération européenne des syndicats liste prioritaire (CES) pour REACH autorisation | L'Union européenne (UE) l'annexe I de la directive 67/548/CEE sur la classification et l'étiquetage des substances dangereuses (mise à jour par l'ATP: 31) - Substances cancérogènes |
| Du Règlement REACH (CE) N ° 1907/2006, Annexe XVII - Restrictions à la fabrication, la mise sur le marché et l'utilisation de certaines substances dangereuses, les mélanges et les articles | L'Union européenne (UE) l'annexe I de la directive 67/548/CEE sur la classification et l'étiquetage des substances dangereuses (mise à jour par l'ATP: 31) - Substances toxiques pour la reproduction |
| Du Règlement REACH (CE) N ° 1907/2006, Annexe XVII (Annexe 2) Cancérogènes: catégorie 1B (Tableau 3.1)/catégorie 2 (Tableau 3.2) | L'Union européenne (UE) Règlement (CE) N ° 1272/2008 relatif à la Classification, à l'Étiquetage et à l'Emballage des Substances et des Mélanges - Annexe VI |
| Inventaire européen des substances chimiques douanes ECICS (en anglais) | Règlement REACH de l'UE (CE) n ° 1907/2006 - Propositions pour identifier les substances extrêmement préoccupantes: les rapports de l'annexe XV de commenter par les parties intéressées |
| La France des Valeurs limites d'Exposition Professionnelle - VLE/VME (français) | Union européenne - Inventaire Européen des Substances Chimiques Commerciales Existantes (EINECS) (en anglais) |
| L'Europe industries aérospatiales et de défense Association of Europe (ASD) de mise en œuvre de REACH Groupe de travail prioritaire Liste des substances déclarables (PDSL) | |

**BISPHENOL A/ PHOSGENE POLYMER(25971-63-5) EST DISPONIBLE DANS LES TEXTES RÉGLEMENTAIRES SUIVANTS**

| | |
|---|---|
| Du Règlement REACH (CE) N ° 1907/2006, Annexe XVII - Restrictions à la fabrication, la mise sur le marché et l'utilisation de certaines substances dangereuses, les mélanges et les articles | Inventaire européen des substances chimiques douanes ECICS (en anglais) |

Cette SDS est en conformité avec les règlementations européennes et modifications suivantes - dans la mesure où elles sont applicables : 67/548/EEC, 1999/45/EC, 98/24/EC, 92/85/EC, 94/33/EC, 91/689/EEC, 1999/13/EC, Règlement (UE) no 2015/830, règlement (CE) no 1272/2008 et de leurs amendements ainsi qu'avec les règlementations Britanniques suivantes :

### 15.2. Évaluation de la sécurité chimique

Pour de plus amples informations s'il vous plaît regarder à l'évaluation de la sécurité chimique et des scénarios d'exposition élaborés par votre Supply Chain, si disponible.

**RÉSUMÉ ECHA**

| Composant | Numéro CAS | Numéro index | ECHA Dossier |
|---|---|---|---|
| dioxyde-de-cobalt-et-de-lithium | 12190-79-3 | Pas Disponible | Pas Disponible |

| l'harmonisation (C & L Inventaire) | Classe de danger et catégorie de code (s) | Code de pictogrammes Mention d'avertissement (s) | Code de Hazard Statement (s) |
|---|---|---|---|
| 1 | Skin Sens. 1, Carc. 1B | GHS07, GHS08, Dgr | H317, H350 |
| 2 | Repr. 2, Skin Sens. 1, Carc. 1B, Aquatic Chronic 3, Acute Tox. 4, Resp. Sens. 1, Not Classified | GHS08, Wng, Dgr | H361, H317, H350, H302, H334 |

*1 Code Harmonisation = La classification la plus répandue. Code de l'harmonisation = 2 La classification la plus stricte.*

| Composant | Numéro CAS | Numéro index | ECHA Dossier |
|---|---|---|---|
| hexafluorophosphate(1-) de lithium | 21324-40-3 | Pas Disponible | 01-2119383485-29-XXXX |

| l'harmonisation (C & L Inventaire) | Classe de danger et catégorie de code (s) | Code de pictogrammes Mention d'avertissement (s) | Code de Hazard Statement (s) |
|---|---|---|---|
| 1 | Acute Tox. 3, Skin Corr. 1A, Eye Dam. 1, STOT RE 1 | GHS06, GHS05, GHS08, Dgr | H301, H314, H318, H372 |
| 2 | Acute Tox. 3, Skin Corr. 1A, Eye Dam. 1, STOT RE 1, Skin Corr. 1B, Acute Tox. 4, Skin Corr. 1C, Met. Corr. 1 | GHS06, GHS05, GHS08, Dgr | H301, H314, H372, H318, H311, H331, H290 |

*1 Code Harmonisation = La classification la plus répandue. Code de l'harmonisation = 2 La classification la plus stricte.*

| Composant | Numéro CAS | Numéro index | ECHA Dossier |
|---|---|---|---|
| carbonate-d'éthylène | 96-49-1 | Pas Disponible | 01-2119540523-46-XXXX |

**Continued...**

| l'harmonisation (C & L Inventaire) | Classe de danger et catégorie de code (s) | Code de pictogrammes Mention d'avertissement (s) | Code de Hazard Statement (s) |
|---|---|---|---|
| 2 | Acute Tox. 4, Eye Irrit. 2, STOT RE 2, Not Classified, Eye Dam. 1, Skin Irrit. 2, STOT SE 3 | GHS08, Wng, Dgr, GHS05 | H302, H373, H318, H315, H335 |

*1 Code Harmonisation = La classification la plus répandue. Code de l'harmonisation = 2 La classification la plus stricte.*

| Composant | Numéro CAS | Numéro index | ECHA Dossier |
|---|---|---|---|
| graphite | 7782-42-5 | Pas Disponible | 01-2119486977-12-XXXX, 01-2119875125-36-XXXX |

| l'harmonisation (C & L Inventaire) | Classe de danger et catégorie de code (s) | Code de pictogrammes Mention d'avertissement (s) | Code de Hazard Statement (s) |
|---|---|---|---|
| 1 | Not Classified | Wng, GHS08, Dgr, GHS02 | H335, H315, H372, H318, H302, H228 |
| 2 | Not Classified, Eye Irrit. 2, STOT SE 3, Skin Irrit. 2, STOT RE 1, Acute Tox. 4, Aquatic Chronic 3, STOT RE 2 | Wng, GHS08, Dgr, GHS02 | H335, H315, H372, H318, H302, H228 |

*1 Code Harmonisation = La classification la plus répandue. Code de l'harmonisation = 2 La classification la plus stricte.*

| Composant | Numéro CAS | Numéro index | ECHA Dossier |
|---|---|---|---|
| plomb | 7439-92-1 | 082-002-00-1 | 01-2119513221-59-XXXX |

| l'harmonisation (C & L Inventaire) | Classe de danger et catégorie de code (s) | Code de pictogrammes Mention d'avertissement (s) | Code de Hazard Statement (s) |
|---|---|---|---|
| 2 | Not Classified, Repr. 1A, STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1, Acute Tox. 4, STOT RE 2, Aquatic Chronic 4, Carc. 2, Repr. 1B, Muta. 2, Repr. 2, Acute Tox. 3, STOT SE 2 | GHS09, GHS08, Dgr, Wng, GHS06, GHS02, GHS05, GHS03 | H360, H372, H351, H315, H331, H311, H341, H301, H371 |
| 1 | Acute Tox. 4, Carc. 2, Repr. 1A, STOT RE 1, Aquatic Chronic 3 | GHS07, GHS08, Dgr | H302, H332, H351, H360, H372 |
| 2 | Acute Tox. 4, Carc. 2, Repr. 1A, STOT RE 1, Aquatic Chronic 3, STOT RE 2, Aquatic Acute 1, Aquatic Chronic 2 | GHS08, Dgr, GHS09 | H302, H332, H351, H360, H372 |
| 1 | Skin Irrit. 2, Eye Irrit. 2 | GHS07, Wng | H315, H319 |
| 2 | Skin Irrit. 2, Eye Irrit. 2 | GHS07, Wng | H315, H319 |

*1 Code Harmonisation = La classification la plus répandue. Code de l'harmonisation = 2 La classification la plus stricte.*

| Composant | Numéro CAS | Numéro index | ECHA Dossier |
|---|---|---|---|
| mercure | 7439-97-6 | 080-001-00-0 | 01-2119548380-42-XXXX |

| l'harmonisation (C & L Inventaire) | Classe de danger et catégorie de code (s) | Code de pictogrammes Mention d'avertissement (s) | Code de Hazard Statement (s) |
|---|---|---|---|
| 2 | Acute Tox. 2, Repr. 1B, STOT RE 1, Aquatic Chronic 1, Met. Corr. 1, Acute Tox. 1, Aquatic Acute 1, Acute Tox. 3, STOT RE 2, Skin Sens. 1, Muta. 2, Repr. 1A, STOT SE 1 | GHS06, GHS09, GHS08, Dgr, GHS05 | H330, H360, H372, H290, H311, H250, H300, H317, H341, H371 |
| 1 | Ox. Sol. 2, Acute Tox. 3, Acute Tox. 4, Skin Corr. 1B, Skin Sens. 1, Acute Tox. 2, Resp. Sens. 1, Muta. 1B, Carc. 1B, Repr. 1B, STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1 | GHS09, GHS06, GHS05, GHS08, GHS03, Dgr | H272, H301, H312, H314, H317, H330, H334, H340, H350, H360, H372 |
| 2 | Ox. Sol. 2, Acute Tox. 3, Acute Tox. 4, Skin Corr. 1B, Skin Sens. 1, Acute Tox. 2, Resp. Sens. 1, Muta. 1B, Carc. 1B, Repr. 1B, STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1 | GHS09, GHS06, GHS05, GHS08, GHS03, Dgr | H272, H301, H312, H314, H317, H330, H334, H340, H350, H360, H372 |
| 1 | Ox. Sol. 2, Acute Tox. 4, Aquatic Acute 1, Aquatic Chronic 1 | GHS07, GHS09, GHS03, Dgr | H272, H302 |
| 2 | Ox. Sol. 2, Acute Tox. 4, Aquatic Acute 1, Aquatic Chronic 1 | GHS07, GHS09, GHS03, Dgr | H272, H302 |

*1 Code Harmonisation = La classification la plus répandue. Code de l'harmonisation = 2 La classification la plus stricte.*

| Composant | Numéro CAS | Numéro index | ECHA Dossier |
|---|---|---|---|
| plomb | 7439-92-1 | 082-002-00-1 | 01-2119513221-59-XXXX |

| l'harmonisation (C & L Inventaire) | Classe de danger et catégorie de code (s) | Code de pictogrammes Mention d'avertissement (s) | Code de Hazard Statement (s) |
|---|---|---|---|
| 2 | Not Classified, Repr. 1A, STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1, Acute Tox. 4, STOT RE 2, Aquatic Chronic 4, Carc. 2, Repr. 1B, Muta. 2, Repr. 2, Acute Tox. 3, STOT SE 2 | GHS09, GHS08, Dgr, Wng, GHS06, GHS02, GHS05, GHS03 | H360, H372, H351, H315, H331, H311, H341, H301, H371 |
| 1 | Acute Tox. 4, Carc. 2, Repr. 1A, STOT RE 1, Aquatic Chronic 3 | GHS07, GHS08, Dgr | H302, H332, H351, H360, H372 |
| 2 | Acute Tox. 4, Carc. 2, Repr. 1A, STOT RE 1, Aquatic Chronic 3, STOT RE 2, Aquatic Acute 1, Aquatic Chronic 2 | GHS08, Dgr, GHS09 | H302, H332, H351, H360, H372 |
| 1 | Skin Irrit. 2, Eye Irrit. 2 | GHS07, Wng | H315, H319 |
| 2 | Skin Irrit. 2, Eye Irrit. 2 | GHS07, Wng | H315, H319 |

*1 Code Harmonisation = La classification la plus répandue. Code de l'harmonisation = 2 La classification la plus stricte.*

| Composant | Numéro CAS | Numéro index | ECHA Dossier |
|---|---|---|---|
| mercure | 7439-97-6 | 080-001-00-0 | 01-2119548380-42-XXXX |

| l'harmonisation (C & L Inventaire) | Classe de danger et catégorie de code (s) | Code de pictogrammes Mention d'avertissement (s) | Code de Hazard Statement (s) |
|---|---|---|---|

**Continued...**

| | | | |
|---|---|---|---|
| 2 | Acute Tox. 2, Repr. 1B, STOT RE 1, Aquatic Chronic 1, Met. Corr. 1, Acute Tox. 1, Aquatic Acute 1, Acute Tox. 3, STOT RE 2, Skin Sens. 1, Muta. 2, Repr. 1A, STOT SE 1 | GHS06, GHS09, GHS08, Dgr, GHS05 | H330, H360, H372, H290, H311, H250, H300, H317, H341, H371 |
| 1 | Ox. Sol. 2, Acute Tox. 3, Acute Tox. 4, Skin Corr. 1B, Skin Sens. 1, Acute Tox. 2, Resp. Sens. 1, Muta. 1B, Carc. 1B, Repr. 1B, STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1 | GHS09, GHS06, GHS05, GHS08, GHS03, Dgr | H272, H301, H312, H314, H317, H330, H334, H340, H350, H360, H372 |
| 2 | Ox. Sol. 2, Acute Tox. 3, Acute Tox. 4, Skin Corr. 1B, Skin Sens. 1, Acute Tox. 2, Resp. Sens. 1, Muta. 1B, Carc. 1B, Repr. 1B, STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1 | GHS09, GHS06, GHS05, GHS08, GHS03, Dgr | H272, H301, H312, H314, H317, H330, H334, H340, H350, H360, H372 |
| 1 | Ox. Sol. 2, Acute Tox. 4, Aquatic Acute 1, Aquatic Chronic 1 | GHS07, GHS09, GHS03, Dgr | H272, H302 |
| 2 | Ox. Sol. 2, Acute Tox. 4, Aquatic Acute 1, Aquatic Chronic 1 | GHS07, GHS09, GHS03, Dgr | H272, H302 |

*1 Code Harmonisation = La classification la plus répandue. Code de l'harmonisation = 2 La classification la plus stricte.*

| Composant | Numéro CAS | Numéro index | ECHA Dossier |
|---|---|---|---|
| chrome | 7440-47-3 | Pas Disponible | 01-2119485652-31-XXXX |

| l'harmonisation (C & L Inventaire) | Classe de danger et catégorie de code (s) | Code de pictogrammes Mention d'avertissement (s) | Code de Hazard Statement (s) |
|---|---|---|---|
| 1 | Not Classified | GHS08, Dgr, Wng, GHS09, GHS02, GHS03, GHS05 | H317, H334, H319, H228, H371, H315, H272, H350, H341, H335, H314 |
| 2 | Not Classified, Skin Sens. 1, Resp. Sens. 1, Eye Irrit. 2, Aquatic Acute 1, Aquatic Chronic 1, Aquatic Chronic 4, STOT SE 2, Skin Irrit. 2, Muta. 2, Carc. 2, STOT RE 2, Ox. Liq. 2, Carc. 1B, Flam. Sol. 1, Flam. Sol. 2, STOT SE 3 | GHS08, Dgr, Wng, GHS09, GHS02, GHS03 | H317, H334, H319, H228, H371, H315, H272, H350, H341, H335 |
| 1 | Skin Corr. 1B | GHS05, Dgr | H314 |
| 2 | Skin Corr. 1B | GHS05, Dgr | H314 |
| 1 | Skin Corr. 1B | GHS05, Dgr | H314 |
| 2 | Skin Corr. 1B | GHS05, Dgr | H314 |
| 1 | Skin Corr. 1B | GHS05, Dgr | H314 |
| 2 | Skin Corr. 1B | GHS05, Dgr | H314 |

*1 Code Harmonisation = La classification la plus répandue. Code de l'harmonisation = 2 La classification la plus stricte.*

| Composant | Numéro CAS | Numéro index | ECHA Dossier |
|---|---|---|---|
| cadmium | 7440-43-9 | 048-002-00-0, 048-011-00-X | 01-2119489023-40-XXXX |

| l'harmonisation (C & L Inventaire) | Classe de danger et catégorie de code (s) | Code de pictogrammes Mention d'avertissement (s) | Code de Hazard Statement (s) |
|---|---|---|---|
| 2 | Pyr. Sol. 1, Acute Tox. 2, Muta. 2, Carc. 1B, Repr. 2, STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1, STOT SE 3, Acute Tox. 3 | GHS02, GHS09, GHS06, GHS08, Dgr, Wng | H250, H330, H341, H350, H361, H372, H335, H301 |
| 2 | Pyr. Sol. 1, Acute Tox. 2, Muta. 2, Carc. 1B, Repr. 2, STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1, STOT SE 3, Acute Tox. 3 | GHS02, GHS09, GHS06, GHS08, Dgr, Wng | H250, H330, H341, H350, H361, H372, H335, H301 |
| 1 | Skin Irrit. 2, Eye Irrit. 2, Carc. 1B | GHS07, GHS08, Dgr | H315, H319, H350 |
| 2 | Skin Irrit. 2, Eye Irrit. 2, Carc. 1B, Skin Corr. 1B, Acute Tox. 4 | GHS08, Dgr, GHS05 | H319, H350, H314, H332 |
| 1 | Carc. 1B | GHS08, Dgr | H350 |
| 2 | Carc. 1B | GHS08, Dgr | H350 |

*1 Code Harmonisation = La classification la plus répandue. Code de l'harmonisation = 2 La classification la plus stricte.*

| Composant | Numéro CAS | Numéro index | ECHA Dossier |
|---|---|---|---|
| bisphenol A/ phosgene polymer | 25971-63-5 | Pas Disponible | Pas Disponible |

| l'harmonisation (C & L Inventaire) | Classe de danger et catégorie de code (s) | Code de pictogrammes Mention d'avertissement (s) | Code de Hazard Statement (s) |
|---|---|---|---|
| 1 | Skin Irrit. 2, Eye Irrit. 2 | GHS07, Wng | H315, H319 |
| 2 | Not Classified, Skin Irrit. 2, Eye Irrit. 2 | GHS07, Wng | H315, H319 |

*1 Code Harmonisation = La classification la plus répandue. Code de l'harmonisation = 2 La classification la plus stricte.*

| Inventaire national | Statut |
|---|---|
| Australie - AICS | Y |
| Canada - DSL | N (hexafluorophosphate(1-) de lithium) |
| Canada - NDSL | N (plomb; graphite; bisphenol A/ phosgene polymer; carbonate-d'éthylène; mercure; dioxyde-de-cobalt-et-de-lithium; chrome; cadmium) |
| Chine - IECSC | Y |
| Europe - EINEC / ELINCS / NLP | N (bisphenol A/ phosgene polymer) |
| Japon - ENCS | N (graphite; mercure; chrome; hexafluorophosphate(1-) de lithium; cadmium) |
| Corée - KECI | Y |
| New Zealand - NZIoC | N (hexafluorophosphate(1-) de lithium) |
| Philippines - PICCS | N (dioxyde-de-cobalt-et-de-lithium) |

**Continued...**

| | |
|---|---|
| É.-U.A. - TSCA | Y |
| ***Légende:*** | *O = Tous les ingrédients sont dans l'inventaire*<br>*N = Non déterminé ou un ou plusieurs des ingrédients ne sont pas dans l'inventaire et ne sont pas exonérés d'une inscription sur liste (voir les ingrédients spécifiques entre parenthèses)* |

## SECTION 16 AUTRES INFORMATIONS

### Codes pleine de risques de texte et de danger

| | |
|---|---|
| **H228** | Matière solide inflammable. |
| **H250** | S'enflamme spontanément au contact de l'air. |
| **H272** | Peut aggraver un incendie; comburant. |
| **H290** | Peut être corrosif pour les métaux. |
| **H300** | Mortel en cas d'ingestion. |
| **H301** | Toxique en cas d'ingestion. |
| **H302** | Nocif en cas d'ingestion. |
| **H310** | Mortel par contact cutané. |
| **H311** | Toxique par contact cutané. |
| **H312** | Nocif par contact cutané. |
| **H314** | Provoque des brûlures de la peau et des lésions oculaires graves. |
| **H315** | Provoque une irritation cutanée. |
| **H317** | Peut provoquer une allergie cutanée. |
| **H318** | Provoque des lésions oculaires graves. |
| **H319** | Provoque une sévère irritation des yeux. |
| **H330** | Mortel par inhalation. |
| **H331** | Toxique par inhalation. |
| **H332** | Nocif par inhalation. |
| **H334** | Peut provoquer des symptômes allergiques ou d'asthme ou des difficultés respiratoires par inhalation. |
| **H335** | Peut irriter les voies respiratoires. |
| **H340** | Peut induire des anomalies génétiques . |
| **H341** | Susceptible d'induire des anomalies génétiques . |
| **H350** | Peut provoquer le cancer . |
| **H351** | Susceptible de provoquer le cancer . |
| **H360** | Peut nuire à la fertilité ou au fœtus . |
| **H360D** | Peut nuire au foetus. |
| **H360Df** | Peut nuire au foetus. Susceptible de nuire à la fertilité. |
| **H361** | Susceptible de nuire à la fertilité ou au fœtus . |
| **H361fd** | Susceptible de nuire à la fertilité. Susceptible de nuire au foetus. |
| **H371** | Risque présumé d'effets graves pour les organes . |
| **H372** | Risque avéré d'effets graves pour les organes à la suite d'expositions répétées ou d'une exposition prolongée |
| **H373** | Risque présumé d'effets graves pour les organes à la suite d'expositions répétées ou d'une exposition prolongée |
| **H400** | Très toxique pour les organismes aquatiques. |
| **H410** | Très toxique pour les organismes aquatiques, entraîne des effets néfastes à long terme. |

| | |
|---|---|
| **R17** | Spontanément inflammable à l'air. |
| **R19** | Peut former des peroxydes explosifs. |
| **R22** | Nocif en cas d'ingestion. |
| **R24** | Toxique par contact avec la peau. |
| **R26** | Très toxique par inhalation. |
| **R26/27/28** | Très toxique par inhalation, par contact avec la peau et par ingestion. |
| **R33** | Danger d'effets cumulatifs. |
| **R34** | Provoque des brûlures. |
| **R36/37** | Irritant pour les yeux et les voies respiratoires. |
| **R37/38** | Irritant pour les voies respiratoires et la peau. |
| **R40(3)** | Effet cancérogène suspecté preuves insuffisantes. |
| **R41** | Risque de lésions oculaires graves. |
| **R45** | Peut provoquer le CANCER. |
| **R48/20** | Nocif: risque d'effets graves pour la santé en cas d'exposition prolongée par inhalation. |
| **R48/23** | Toxique: risque d'effets graves pour la santé en cas d'exposition prolongée par inhalation. |
| **R48/23/25** | Toxique: risque d'effets graves pour la santé en cas d'exposition prolongée par inhalation et par ingestion. |
| **R50/53** | Très toxique pour les organismes aquatiques, peut entraîner des effets néfastes à long terme pour l'environnement aquatique. |

**Continued...**

| | |
|---|---|
| **R52** | Nocif pour les organismes aquatiques. |
| **R61** | Risque pendant la grossesse d'effets néfastes pour l'enfant. |
| **R62** | Risque possible d'altération de la fertilité. |
| **R63** | Risque possible pendant la grossesse d'effets néfastes pour l'enfant. |
| **R68** | Possibilité d'effets irréversibles. |

### autres informations

### Eléments pour étiquette DSD / DPD

Sans Objet

Les déclarations de risque pertinent sont enumérés dans la section 2.1

| | |
|---|---|
| **Indications de danger** | Sans Objet |

**CONSIGNES DE SÉCURITÉ**

| | |
|---|---|
| **S08** | Conserver le récipient à l'abri de l'humidité. |

La classification de la substance et de ses ingrédients provient de sources officielles ainsi que d'une révision indépendante par SDI Limited à l'aide de références littéraires.

La fiche technique santé-sécurité (SDS) est un outil de communication orienté sur le risque et qui doit être utilisé dans le cadre de la politique d'évaluation du risque. De nombreux facteurs peuvent influencer la diffusion d'information au sujet des risques sur le lieu de travail ou dans d'autres cadres. Les risques peuvent être déterminés en référence à des Scénarios d'exposition. L'échelle d'usage, la fréquence d'utilisation et les mécanismes techniques disponibles et actuels doivent faire l'objet d'une réflexion poussée.

Pour des conseils détaillés sur les équipements de protection individuels, se référer aux standards CEN de l'UE suivants :
EN 166 - Protection individuelle des yeux
EN 340 - Vêtements de protection
EN 374 - Gants de protection contre les produits chimiques et les micro-organismes.
EN 13832 - Protection des chaussures contre les produits chimiques
EN 133 - Protection individuelle pour la respiration

### Définitions et abréviations

PC—TWA : Concentration autorisée - moyenne pondérée dans le temps
PC-STEL : Concentration autorisée - Limite d'exposition à court terme
IARC : Centre international de recherche sur le cancer
ACGIH : Conférence américaine des hygiénistes gouvernementaux
STEL : Limite d'exposition à court terme
TEEL : Limites d'exposition d'urgence temporaire
IDLH : Concentrations immédiatement dangereuses pour la vie ou la santé
FSO : Facteur de sécurité olfactive
DSENO : Dose sans effet nocif observé
DMENO : Dose minimale avec effet nocif observé
TLV : Valeur limite seuil
LOD : Limite de détection
OTV: Valeur de seuil olfactif
FBC : Facteurs de bioconcentration
IBE : Indice biologique d'expositionv

Les informations contenues dans la fiche de données de sécurité se basent sur des données considérées comme exactes. Néanmoins, aucune garantie expresse ou implicite n'est donnée en ce qui concerne l'exactitude des données ou des résultats qui seront obtenus d'aprés leur utilisation.

# Pola Office Liquid

**SDI Limited**

Version No: **5.1.1.1**
Safety Data Sheet (Conforms to Regulations (EC) No 2015/830)

Issue Date: **29/01/2016**
Print Date: **23/03/2016**
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** | Pola Office Liquid |
| **Synonyms** | Not Available |
| **Proper shipping name** | HYDROGEN PEROXIDE, AQUEOUS SOLUTION with not less than 20% but not more than 60% hydrogen peroxide (stabilized as necessary) |
| **Other means of identification** | Not Available |

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

| | |
|---|---|
| **Relevant identified uses** | To remove discoloration of teeth, to be performed by a dentist. |
| **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 Brunsdon 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 |

**Continued...**

| | | |
|---|---|---|
| **DPD classification [1]** | R37/38 | Irritating to respiratory system and skin. |
| | 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] [1]** | Oxidizing Liquid Category 2, Metal Corrosion Category 1, Skin Corrosion/Irritation Category 1A, Serious Eye Damage Category 1, Specific target organ toxicity - single exposure Category 3 (respiratory tract irritation) | |
| ***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** | **DANGER** |

### Hazard statement(s)

| | |
|---|---|
| **H272** | May intensify fire; oxidiser. |
| **H290** | May be corrosive to metals. |
| **H314** | Causes severe skin burns and eye damage. |
| **H318** | Causes serious eye damage. |
| **H335** | May cause respiratory irritation. |

### Supplementary statement(s)

Not Applicable

### Precautionary statement(s) Prevention

| | |
|---|---|
| **P210** | Keep away from heat/sparks/open flames/hot surfaces. No smoking. |
| **P221** | Take any precaution to avoid mixing with combustibles/organic material. |
| **P260** | Do not breathe dust/fume/gas/mist/vapours/spray. |
| **P271** | Use only outdoors or in a well-ventilated area. |
| **P280** | Wear protective gloves/protective clothing/eye protection/face protection. |
| **P220** | Keep/Store away from clothing/organic material/combustible materials. |
| **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. |
| **P370+P378** | In case of fire: Use alcohol resistant foam or fine spray/water fog to extinguish. |
| **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. |
| **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

Ingestion may produce health damage*.

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 | %[weight] | Name | Classification according to | Classification according to regulation (EC) No 1272/2008 [CLP] |
|---|---|---|---|---|

**Continued...**

| 2.EC No<br>3.Index No<br>4.REACH No | | | directive 67/548/EEC [DSD] | |
|---|---|---|---|---|
| 1.7722-84-1<br>2.231-765-0<br>3.008-003-00-9<br>4.01-2119485845-22-XXXX | 35 | hydrogen peroxide | R5, R8, R20/22, R35 [2] | Oxidizing Liquid Category 1, Acute Toxicity (Inhalation) Category 4, Acute Toxicity (Oral) Category 4, Skin Corrosion/Irritation Category 1A; H271, H332, H302, H314 [3] |
| ***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** | If skin contact occurs:<br>▸ Immediately remove all contaminated clothing, including footwear.<br>▸ Flush skin and hair with running water (and soap if available).<br>▸ Seek medical attention in event of irritation.<br><br>If this product comes in contact with the eyes:<br>▸ Immediately hold eyelids apart and flush the eye continuously with running water.<br>▸ 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.<br>▸ Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.<br>▸ Transport to hospital or doctor without delay.<br>▸ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.<br>▸ If fumes or combustion products are inhaled remove from contaminated area.<br>▸ Seek medical attention.<br>▸ If swallowed do **NOT** induce vomiting.<br>▸ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.<br>▸ Observe the patient carefully.<br>▸ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.<br>▸ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.<br>▸ Seek medical advice. |
| **Eye Contact** | If this product comes in contact with the eyes:<br>▸ Immediately hold eyelids apart and flush the eye continuously with running water.<br>▸ 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.<br>▸ Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.<br>▸ Transport to hospital or doctor without delay.<br>▸ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel. |
| **Skin Contact** | If skin contact occurs:<br>▸ Immediately remove all contaminated clothing, including footwear.<br>▸ Flush skin and hair with running water (and soap if available).<br>▸ Seek medical attention in event of irritation. |
| **Inhalation** | ▸ If fumes or combustion products are inhaled remove from contaminated area.<br>▸ Seek medical attention. |
| **Ingestion** | ▸ If swallowed do **NOT** induce vomiting.<br>▸ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.<br>▸ Observe the patient carefully.<br>▸ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.<br>▸ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.<br>▸ Seek medical advice. |

### 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

Depending on the degree of exposure, periodic medical examination is indicated. The symptoms of lung oedema often do not manifest until a few hours have passed and they are aggravated by physical effort. Rest and medical observation is therefore essential. Immediate administration of an appropriate spray, by a doctor or a person authorised by him/her should be considered. (ICSC24419/24421

## SECTION 5 FIREFIGHTING MEASURES

### 5.1. Extinguishing media

FOR **SMALL FIRE:**
- USE FLOODING QUANTITIES OF WATER.
- **DO NOT** use dry chemical, CO2, foam or halogenated-type extinguishers.

FOR **LARGE FIRE**
- Flood fire area with water from a protected position

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

| | |
|---|---|
| **Fire Incompatibility** | ▸ Avoid any contamination of this material as it is very reactive and any contamination is potentially hazardous<br>▸ Reacts vigorously with alkali metals |

### 5.3. Advice for firefighters

| | |
|---|---|
| **Fire Fighting** | ▸ Alert Fire Brigade and tell them location and nature of hazard.<br>▸ May be violently or explosively reactive.<br>▸ Wear full body protective clothing with breathing apparatus.<br>▸ Prevent, by any means available, spillage from entering drains or water courses. |

**Continued...**

| | |
|---|---|
| | ▸ Fight fire from a safe distance, with adequate cover.<br>▸ Extinguishers should be used only by trained personnel.<br>▸ Use water delivered as a fine spray to control fire and cool adjacent area.<br>▸ **DO NOT** approach containers suspected to be hot.<br>▸ Cool fire exposed containers with water spray from a protected location.<br>▸ If safe to do so, remove containers from path of fire.<br>▸ If fire gets out of control withdraw personnel and warn against entry.<br>▸ Equipment should be thoroughly decontaminated after use. |
| **Fire/Explosion Hazard** | ▸ Will not burn but increases intensity of fire.<br>▸ May explode from friction, shock, heat or containment.<br>▸ Heating may cause expansion or decomposition leading to violent rupture of containers.<br>▸ Heat affected containers remain hazardous.<br>▸ Contact with combustibles such as wood, paper, oil or finely divided metal may produce spontaneous combustion or violent decomposition.<br>▸ May emit irritating, poisonous or corrosive fumes.<br>▸ Combustion/decomposition may produce acrid/toxic fumes of carbon monoxide (CO).<br>Combustion products include; carbon dioxide ($CO_2$) other pyrolysis products typical of burning organic material sulfur oxides (SOx) |

## 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** | ▸ Drains for storage or use areas should have retention basins for pH adjustments and dilution of spills before discharge or disposal of material.<br>▸ Check regularly for spills and leaks.<br>▸ Clean up all spills immediately.<br>▸ No smoking, naked lights, ignition sources.<br>▸ Avoid all contact with any organic matter including fuel, solvents, sawdust, paper or cloth and other incompatible materials, as ignition may result.<br>▸ Avoid breathing dust or vapours and all contact with skin and eyes.<br>▸ Control personal contact with the substance, by using protective equipment.<br>▸ Contain and absorb spill with dry sand, earth, inert material or vermiculite.<br>▸ **DO NOT** use sawdust as fire may result.<br>▸ Scoop up solid residues and seal in labelled drums for disposal.<br>▸ Neutralise/decontaminate area. |
| **Major Spills** | ▸ Clear area of personnel and move upwind.<br>▸ Alert Fire Brigade and tell them location and nature of hazard.<br>▸ May be violently or explosively reactive.<br>▸ Wear full body protective clothing with breathing apparatus.<br>▸ Prevent, by any means available, spillage from entering drains or water course.<br>▸ Consider evacuation (or protect in place).<br>▸ No smoking, flames or ignition sources.<br>▸ Increase ventilation.<br>▸ Contain spill with sand, earth or other clean, inert materials.<br>▸ **NEVER** use organic absorbents such as sawdust, paper, cloth; as fire may result.<br>▸ Avoid any contamination by organic matter.<br>▸ Use spark-free and explosion-proof equipment.<br>▸ Collect any recoverable product into labelled containers for possible recycling.<br>▸ **DO NOT** mix fresh with recovered material.<br>▸ Collect residues and seal in labelled drums for disposal.<br>▸ Wash area and prevent runoff into drains.<br>▸ Decontaminate equipment and launder all protective clothing before storage and re-use.<br>▸ If contamination of drains or waterways occurs advise emergency services. |

### 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** | ▸ Avoid all personal contact, including inhalation.<br>▸ Wear protective clothing when risk of overexposure occurs.<br>▸ Use in a well-ventilated area.<br>▸ Prevent concentration in hollows and sumps.<br>▸ **DO NOT** enter confined spaces until atmosphere has been checked.<br>▸ Avoid smoking, naked lights or ignition sources.<br>▸ Avoid generation of static electricity.<br>▸ **DO NOT** use plastic buckets.<br>▸ Earth all lines and equipment.<br>▸ Use spark-free tools when handling.<br>▸ Avoid contact with incompatible materials.<br>▸ When handling, **DO NOT** eat, drink or smoke.<br>▸ Keep containers securely sealed when not in use.<br>▸ Avoid physical damage to containers.<br>▸ Always wash hands with soap and water after handling.<br>▸ Work clothes should be laundered separately.<br>▸ Use good occupational work practice.<br>▸ Observe manufacturer's storage and handling recommendations contained within this SDS.<br>▸ Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions. |

**Continued...**

| | |
|---|---|
| **Fire and explosion protection** | See section 5 |
| **Other information** | Store between 2 and 8 deg C.<br>**Do not** store in direct sunlight.<br>Store in a dry and well ventilated-area, away from heat and sunlight. |

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

| | |
|---|---|
| **Suitable container** | ▸ **DO NOT** repack. Use containers supplied by manufacturer only. |
| **Storage incompatibility** | ▸ Avoid strong acids, bases. |

### 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) | hydrogen peroxide | Hydrogen peroxide | 1.4 mg/m3 / 1 ppm | 2.8 mg/m3 / 2 ppm | Not Available | Not Available |

**EMERGENCY LIMITS**

| Ingredient | Material name | TEEL-1 | TEEL-2 | TEEL-3 |
|---|---|---|---|---|
| hydrogen peroxide | Hydrogen peroxide | Not Available | Not Available | Not Available |
| hydrogen peroxide | Hydrogen peroxide - 30% | 33 ppm | 170 ppm | 330 ppm |

| Ingredient | Original IDLH | Revised IDLH |
|---|---|---|
| hydrogen peroxide | 75 ppm | 75 [Unch] ppm |

**MATERIAL DATA**

### 8.2. Exposure controls

**8.2.1. Appropriate engineering controls**

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.
The basic types of engineering controls are:
Process controls which involve changing the way a job activity or process is done to reduce the risk.
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.
Employers may need to use multiple types of controls to prevent employee overexposure.

Local exhaust ventilation usually required. If risk of overexposure exists, wear approved respirator. Correct fit is essential to obtain adequate protection.
Supplied-air type respirator may be required in special circumstances. Correct fit is essential to ensure adequate protection.
An approved self contained breathing apparatus (SCBA) may be required in some situations.
Provide adequate ventilation in warehouse or closed storage area. 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.

| 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.) |

Within each range the appropriate value depends on:

| 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 |

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

**Continued...**

| | |
|---|---|
| | 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. |
| **8.2.2. Personal protection** |  |
| **Eye and face protection** | ▸ Safety glasses with side shields.<br>▸ Chemical goggles.<br>▸ Full face shield may be required for supplementary but never for primary protection of eyes<br>▸ 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] |
| **Skin protection** | See Hand protection below |
| **Hands/feet protection** | ▸ Wear chemical protective gloves, e.g. PVC.<br>▸ Wear safety footwear or safety gumboots, e.g. Rubber |
| **Body protection** | See Other protection below |
| **Other protection** | ▸ Overalls.<br>▸ PVC Apron.<br>▸ PVC protective suit may be required if exposure severe.<br>▸ Eyewash unit.<br>▸ Ensure there is ready access to a safety shower. |
| **Thermal hazards** | Not Available |

### Respiratory protection

Type B 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 | - | B-PAPR-AUS / Class 1 |
| up to 50 x ES | - | B-AUS / Class 1 | - |
| up to 100 x ES | - | B-2 | B-PAPR-2 ^ |

^ - 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(SO2), G = Agricultural chemicals, K = Ammonia(NH3), 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, colourless liquid; mixes with water. |

| | | | |
|---|---|---|---|
| **Physical state** | Liquid | **Relative density (Water = 1)** | 1.13 |
| **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 |
| **Melting point / freezing point (°C)** | Not Available | **Viscosity (cSt)** | Not Available |
| **Initial boiling point and boiling range (°C)** | Not Available | **Molecular weight (g/mol)** | Not Available |
| **Flash point (°C)** | Not Available | **Taste** | Not Available |
| **Evaporation rate** | Not Available | **Explosive properties** | Not Available |
| **Flammability** | Not Available | **Oxidising properties** | Not Available |
| **Upper Explosive Limit (%)** | Not Available | **Surface Tension (dyn/cm or mN/m)** | Not Available |
| **Lower Explosive Limit (%)** | Not Available | **Volatile Component (%vol)** | Not Available |
| **Vapour pressure (kPa)** | Not Available | **Gas group** | Not Available |
| **Solubility in water (g/L)** | Miscible | **pH as a solution (1%)** | Not Available |
| **Vapour density (Air = 1)** | Not Available | **VOC g/L** | Not Available |

### 9.2. Other information

**Continued...**

Not Available

## SECTION 10 STABILITY AND REACTIVITY

| | |
|---|---|
| **10.1.Reactivity** | See section 7.2 |
| **10.2.Chemical stability** | ▸ Unstable in the presence of incompatible materials.<br>▸ Product is considered stable under normal handling conditions.<br>▸ Prolonged exposure to heat.<br>▸ Hazardous polymerisation will not occur. |
| **10.3. Possibility of hazardous reactions** | See section 7.2 |
| **10.4. Conditions to avoid** | See section 7.2 |
| **10.5. Incompatible materials** | See section 7.2 |
| **10.6. Hazardous decomposition products** | See section 5.3 |

## SECTION 11 TOXICOLOGICAL INFORMATION

### 11.1. Information on toxicological effects

| | |
|---|---|
| **Inhaled** | 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.<br>Inhalation of quantities of liquid mist may be extremely hazardous, even lethal due to spasm, extreme irritation of larynx and bronchi, chemical pneumonitis and pulmonary oedema.<br>Inhalation of excessive levels of mist may result in headache, dizziness, vomiting, diarrhoea, irritability, insomnia and in extreme pulmonary oedema. Systemic poisoning due to hydrogen peroxide inhalation may cause tremors and numbness of the extremities, convulsions, pulmonary oedema, coma and shock.<br>Hydrogen peroxide has poor warning properties. High concentrations of the vapour or mist are likely to cause extreme irritation of the nose and chest, cough, discomfort, shortness of breath, and inflammation of the nose and throat. |
| **Ingestion** | Accidental ingestion of the material may be damaging to the health of the individual. |
| **Skin Contact** | 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.<br>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. |
| **Eye** | 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** | Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems.<br>Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems.<br>Repeated or prolonged exposure to corrosives 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. |

| | | |
|---|---|---|
| **Pola Office Liquid** | **TOXICITY** | **IRRITATION** |
| | Not Available | Not Available |
| **hydrogen peroxide** | **TOXICITY** | **IRRITATION** |
| | dermal (rat) LD50: 3000-5480 mg/kg[1] | Nil reported |
| | Inhalation (rat) LC50: 2 mg/L/4H[2] | |
| | Oral (rat) LD50: 75 mg/kg[1] | |
| ***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* | |

| | |
|---|---|
| **HYDROGEN PEROXIDE** | No significant acute toxicological data identified in literature search.<br><br>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.<br>For hydrogen peroxide**:**<br>Hazard increases with peroxide concentration, high concentrations contain an additive stabiliser.<br>**Pharmacokinetics**<br>Hydrogen peroxide is a normal product of metabolism. It is readily decomposed by catalase in normal cells. In experimental animals exposed to hydrogen peroxide, target organs affected include the lungs, intestine, thymus, liver, and kidney, suggesting its distribution to those sites. |

**Continued...**

Hydrogen peroxide has been detected in breath.
- Absorption: Hydrogen peroxide is decomposed in the bowel before absorption. When applied to tissue, solutions of hydrogen peroxide have poor penetrability.
- Distribution Hydrogen peroxide is produced metabolically in intact cells and tissues. It is formed by reduction of oxygen either directly in a two-electron transfer reaction, often catalysed by flavoproteins, or by an initial one-electron step to O2 followed by dismutation to hydrogen peroxide.
- Hydrogen peroxide has been detected in serum and in intact liver. based on the results of toxicity studies, the lungs, intestine, thymus, liver, and kidney may be distribution sites. In rabbits and cats that died after intravenous administration of hydrogen peroxide, the lungs were pale and emphysematous. Following intraperitoneal injection of hydrogen peroxide in mice, pyknotic nuclei were induced in the intestine and thymus (IARC 1985). Degeneration of hepatic and renal tubular epithelial tissue was observed following oral administration of hydrogen peroxide to mice.
- Metabolism Glutathione peroxidase, responsible for decomposing hydrogen peroxide, is present in normal human tissues (IARC 1985). When hydrogen peroxide comes in contact with catalase, an enzyme found in blood and most tissues, it rapidly decomposes into oxygen and water.
- Excretion Hydrogen peroxide has been detected in human breath at levels ranging from 1.0+/-.5 g/L to 0.34+/-0.17 g/L.

**Carcinogenicity**
Gastric and duodenal lesions including adenomas, carcinomas, and adenocarcinomas have been observed in mice treated orally with hydrogen peroxide.
Marked strain differences in the incidence of tumors have been observed. Papilloma development has been observed in mice treated by dermal application.
**Genotoxicity**
Hydrogen peroxide induced DNA damage, sister chromatid exchanges and chromosomal aberrations in mammalian cells *in vitro* . Hydrogen peroxide induced DNA damage in bacteria (*E. coli*), and was mutagenic to bacteria (*Salmonella typhimurium)* and the fungi, *Neurospora crassa* and *Aspergillis chevallieri*, but not to *Streptomyces griseoflavus*. It was not mutagenic to *Drosophila melanogaster* or to mammalian cells *in vitro*.
**Developmental Toxicity**
Malformations have been observed in chicken embryos treated with hydrogen peroxide, but experiments with mice and rats have been negative.
Female rats that received 0.45% hydrogen peroxide (equivalent to approximately 630 mg/kg/day)7 as the sole drinking fluid for five weeks produced normal litters when mated with untreated males.
Doses of 1.4 to 11 mol/egg hydrogen peroxide (purity 30%) dissolved in water were injected into the airspace of groups of 20-30 white leghorn chicken eggs on day 3 of incubation.
Embryos were examined on day 14. The incidence of embryonic deaths and malformations was dose-related and detected at doses of 2.8 mol/egg and above.
The combined ED50 was 2.7 mol/egg.
**Reproductive Toxicity**
A 1% solution of hydrogen peroxide (equivalent to 1900 mg/kg/day) given as the sole drinking fluid to three-month-old male mice for 7-28 days did not cause infertility.
The substance is classified by IARC as Group 3:
**NOT** classifiable as to its carcinogenicity to humans.
Evidence of carcinogenicity may be inadequate or limited in animal testing.

| | | | |
|---|---|---|---|
| **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 |
|---|---|---|---|---|---|
| hydrogen peroxide | LC50 | 96 | Fish | 0.020mg/L | 3 |
| hydrogen peroxide | EC50 | 3 | Algae or other aquatic plants | 0.27mg/L | 4 |
| hydrogen peroxide | EC50 | 48 | Crustacea | 2.32mg/L | 4 |
| hydrogen peroxide | EC50 | 72 | Algae or other aquatic plants | 0.71mg/L | 4 |
| hydrogen peroxide | NOEC | 192 | Fish | 0.028mg/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 |
|---|---|---|
| hydrogen peroxide | LOW | LOW |

### 12.3. Bioaccumulative potential

| Ingredient | Bioaccumulation |
|---|---|
| hydrogen peroxide | LOW (LogKOW = -1.571) |

### 12.4. Mobility in soil

| Ingredient | Mobility |
|---|---|
| hydrogen peroxide | LOW (KOC = 14.3) |

### 12.5.Results of PBT and vPvB assessment

| | P | B | T |
|---|---|---|---|

**Continued...**

| | | | |
|---|---|---|---|
| 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

| | |
|---|---|
| **Product / Packaging disposal** | Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.<br>A Hierarchy of Controls seems to be common - the user should investigate:<br>▸ Reduction<br>▸ Reuse<br>▸ Recycling<br>▸ Disposal (if all else fails)<br>This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been contaminated, it may be possible to reclaim the product by filtration, distillation or some other means. Shelf life considerations should also be applied in making decisions of this type.<br>Note that properties of a material may change in use, and recycling or reuse may not always be appropriate.<br>▸ **DO NOT** allow wash water from cleaning or process equipment to enter drains.<br>▸ It may be necessary to collect all wash water for treatment before disposal.<br>▸ In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.<br>▸ Where in doubt contact the responsible authority. |
| **Waste treatment options** | Not Available |
| **Sewage disposal options** | Not Available |

## SECTION 14 TRANSPORT INFORMATION

### Labels Required

| | |
|---|---|
| |   |
| **Marine Pollutant** | NO |
| **HAZCHEM** | 2P |

### Land transport (ADR)

| | |
|---|---|
| **14.1.UN number** | 2014 |
| **14.2.Packing group** | II |
| **14.3.UN proper shipping name** | HYDROGEN PEROXIDE, AQUEOUS SOLUTION with not less than 20% but not more than 60% hydrogen peroxide (stabilized as necessary) |
| **14.4.Environmental hazard** | Not Applicable |
| **14.5. Transport hazard class(es)** | Class: 5.1<br>Subrisk: 8 |
| **14.6. Special precautions for user** | Hazard identification (Kemler): 58<br>Classification code: OC1<br>Hazard Label: 5.1+8<br>Special provisions: Not Applicable<br>Limited quantity: 1 L |

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

| | |
|---|---|
| **14.1. UN number** | 2014 |
| **14.2. Packing group** | II |
| **14.3. UN proper shipping name** | Hydrogen peroxide, aqueous solution with 20% or more but 40% or less hydrogen peroxide (stabilized as necessary) |
| **14.4. Environmental hazard** | Not Applicable |
| **14.5. Transport hazard class(es)** | ICAO/IATA Class: 5.1<br>ICAO / IATA Subrisk: 8<br>ERG Code: 5C |
| **14.6. Special precautions for user** | Special provisions: Not Applicable<br>Cargo Only Packing Instructions: 554<br>Cargo Only Maximum Qty / Pack: 5 L |

**Continued...**

| | |
|---|---|
| Passenger and Cargo Packing Instructions | 550 |
| Passenger and Cargo Maximum Qty / Pack | 1 L |
| Passenger and Cargo Limited Quantity Packing Instructions | Y540 |
| Passenger and Cargo Limited Maximum Qty / Pack | 0.5 L |

### Sea transport (IMDG-Code / GGVSee)

| | |
|---|---|
| **14.1. UN number** | 2014 |
| **14.2. Packing group** | II |
| **14.3. UN proper shipping name** | HYDROGEN PEROXIDE, AQUEOUS SOLUTION with not less than 20% but not more than 60% hydrogen peroxide (stabilized as necessary) |
| **14.4. Environmental hazard** | Not Applicable |
| **14.5. Transport hazard class(es)** | IMDG Class: 5.1<br>IMDG Subrisk: 8 |
| **14.6. Special precautions for user** | EMS Number: F-H, S-Q<br>Special provisions: Not Applicable<br>Limited Quantities: 1 L |

### Inland waterways transport (ADN)

| | |
|---|---|
| **14.1. UN number** | 2014 |
| **14.2. Packing group** | II |
| **14.3. UN proper shipping name** | HYDROGEN PEROXIDE, AQUEOUS SOLUTION with not less than 20% but not more than 60% hydrogen peroxide (stabilized as necessary) |
| **14.4. Environmental hazard** | Not Applicable |
| **14.5. Transport hazard class(es)** | 5.1 \| 8 |
| **14.6. Special precautions for user** | Classification code: OC1<br>Special provisions: Not Applicable<br>Limited quantity: 1 L<br>Equipment required: PP, EP<br>Fire cones number: 0 |

### 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.
If packed in 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

**HYDROGEN PEROXIDE(7722-84-1) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

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 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) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs
International Air Transport Association (IATA) Dangerous Goods Regulations - Prohibited List Passenger and Cargo Aircraft
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 |
|---|---|---|---|
| hydrogen peroxide | 7722-84-1 | 008-003-00-9 | 01-2119485845-22-XXXX |

| Harmonisation (C&L Inventory) | Hazard Class and Category Code(s) | Pictograms Signal Word Code(s) | Hazard Statement Code(s) |
|---|---|---|---|
| 1 | Ox. Liq. 1, Acute Tox. 4, Skin Corr. 1A | GHS07, GHS05, GHS03, Dgr | H271, H302, H314, H332 |

**Continued...**

| | | | |
|---|---|---|---|
| 2 | Ox. Liq. 1, Acute Tox. 4, Skin Corr. 1A, Eye Dam. 1, STOT SE 3, Aquatic Chronic 3, Ox. Liq. 2, Acute Tox. 3, Flam. Liq. 2, Skin Corr. 1B, Acute Tox. 2, Met. Corr. 1, Aquatic Chronic 2, Not Classified, Skin Irrit. 2, Eye Irrit. 2 | GHS05, GHS03, Dgr, GHS02, GHS06, GHS09, Wng | H271, H314, H335, H318, H225, H301, H330, H290 |

*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 (hydrogen peroxide) |
| China - IECSC | Y |
| Europe - EINEC / ELINCS / NLP | Y |
| Japan - ENCS | Y |
| Korea - KECI | Y |
| New Zealand - NZIoC | Y |
| Philippines - PICCS | Y |
| USA - TSCA | Y |
| ***Legend:*** | *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

| | |
|---|---|
| **H225** | Highly flammable liquid and vapour. |
| **H271** | May cause fire or explosion; strong oxidiser. |
| **H301** | Toxic if swallowed. |
| **H302** | Harmful if swallowed. |
| **H330** | Fatal if inhaled. |
| **H332** | Harmful if inhaled. |

| | |
|---|---|
| **R20/22** | Harmful by inhalation and if swallowed. |
| **R35** | Causes severe burns. |
| **R5** | Heating may cause an explosion. |
| **R8** | Contact with combustible material may cause fire. |

### Other information

### DSD / DPD label elements

Relevant risk statements are found in section 2.1

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

**SAFETY ADVICE**

| | |
|---|---|
| **S02** | Keep out of reach of children. |
| **S23** | Do not breathe gas/fumes/vapour/spray. |
| **S26** | In case of contact with eyes, rinse with plenty of water and contact Doctor or Poisons Information Centre. |
| **S35** | This material and its container must be disposed of in a safe way. |
| **S37** | Wear suitable gloves. |
| **S39** | Wear eye/face protection. |
| **S40** | To clean the floor and all objects contaminated by this material, use water. |
| **S46** | If swallowed, seek medical advice immediately and show this container or label. |
| **S56** | Dispose of this material and its container at hazardous or special waste collection point. |
| **S64** | 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

**Continued...**

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

Date of preparation/revision: 23rd September 2015

Department issuing SDS: Research and Development

Contact: Technical Director

# Pola Office Powder

**SDI Limited**

Version No: **6.1.1.1**
Safety Data Sheet (Conforms to Regulations (EC) No 2015/830)

Issue Date: **18/03/2016**
Print Date: **24/03/2016**
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** | Pola Office Powder |
| **Synonyms** | Not Available |
| **Other means of identification** | Not Available |

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

| | |
|---|---|
| **Relevant identified uses** | To remove discoloration of teeth, to be performed by a dentist. |
| **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 Brunsdon 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. Not 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 | |
| **DPD classification [1]** | R36/37/38 | Irritating to eyes, respiratory system and skin. |
| ***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* | |

**Continued...**

| | |
|---|---|
| **Classification according to regulation (EC) No 1272/2008 [CLP] [1]** | Skin Corrosion/Irritation Category 2, Eye Irritation Category 2, Specific target organ toxicity - single exposure Category 3 (respiratory tract irritation) |
| ***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** | **WARNING** |

### Hazard statement(s)

| | |
|---|---|
| **H315** | Causes skin irritation. |
| **H319** | Causes serious eye irritation. |
| **H335** | May cause respiratory irritation. |

### Supplementary statement(s)

Not Applicable

### Precautionary statement(s) Prevention

| | |
|---|---|
| **P271** | Use only outdoors or in a well-ventilated area. |
| **P261** | Avoid breathing dust/fume/gas/mist/vapours/spray. |
| **P280** | Wear protective gloves/protective clothing/eye protection/face protection. |

### Precautionary statement(s) Response

| | |
|---|---|
| **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. |
| **P337+P313** | If eye irritation persists: Get medical advice/attention. |
| **P302+P352** | IF ON SKIN: Wash with plenty of water and soap. |
| **P304+P340** | IF INHALED: Remove person to fresh air and keep comfortable for breathing. |
| **P332+P313** | If skin irritation occurs: Get medical advice/attention. |
| **P362+P364** | Take off contaminated clothing and wash it before reuse. |

### Precautionary statement(s) Storage

| | |
|---|---|
| **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

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.Not Available<br>2.Not Available<br>3.Not Available<br>4.Not Available | 70-75 | silicone dioxide powder | 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

**Continued...**

| | |
|---|---|
| **General** | If skin contact occurs:<br>▸ Immediately remove all contaminated clothing, including footwear.<br>▸ Flush skin and hair with running water (and soap if available).<br>▸ Seek medical attention in event of irritation.<br><br>If this product comes in contact with the eyes:<br>▸ Immediately hold eyelids apart and flush the eye continuously with running water.<br>▸ 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.<br>▸ Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.<br>▸ Transport to hospital or doctor without delay.<br>▸ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.<br>▸ If fumes or combustion products are inhaled remove from contaminated area.<br>▸ Seek medical attention.<br>▸ If swallowed do **NOT** induce vomiting.<br>▸ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.<br>▸ Observe the patient carefully.<br>▸ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.<br>▸ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.<br>▸ Seek medical advice. |
| **Eye Contact** | If this product comes in contact with the eyes:<br>▸ Immediately hold eyelids apart and flush the eye continuously with running water.<br>▸ 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.<br>▸ Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.<br>▸ Transport to hospital or doctor without delay.<br>▸ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel. |
| **Skin Contact** | If skin contact occurs:<br>▸ Immediately remove all contaminated clothing, including footwear.<br>▸ Flush skin and hair with running water (and soap if available).<br>▸ Seek medical attention in event of irritation. |
| **Inhalation** | ▸ If fumes or combustion products are inhaled remove from contaminated area.<br>▸ Seek medical attention. |
| **Ingestion** | ▸ If swallowed do **NOT** induce vomiting.<br>▸ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.<br>▸ Observe the patient carefully.<br>▸ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.<br>▸ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.<br>▸ Seek medical advice. |

### 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

| | |
|---|---|
| **Fire Incompatibility** | ▸ Reacts vigorously with alkali metals |

### 5.3. Advice for firefighters

| | |
|---|---|
| **Fire Fighting** | ▸ Alert Fire Brigade and tell them location and nature of hazard.<br>▸ Wear breathing apparatus plus protective gloves.<br>▸ Prevent, by any means available, spillage from entering drains or water courses.<br>▸ Use water delivered as a fine spray to control fire and cool adjacent area.<br>▸ **DO NOT** approach containers suspected to be hot.<br>▸ Cool fire exposed containers with water spray from a protected location.<br>▸ If safe to do so, remove containers from path of fire.<br>▸ Equipment should be thoroughly decontaminated after use. |
| **Fire/Explosion Hazard** | ▸ Combustible solid which burns but propagates flame with difficulty; it is estimated that most organic dusts are combustible (circa 70%) - according to the circumstances under which the combustion process occurs, such materials may cause fires and / or dust explosions.<br>▸ Organic powders when finely divided over a range of concentrations regardless of particulate size or shape and suspended in air or some other oxidizing medium may form explosive dust-air mixtures and result in a fire or dust explosion (including secondary explosions).<br>▸ Avoid generating dust, particularly clouds of dust in a confined or unventilated space as dusts may form an explosive mixture with air, and any source of ignition, i.e. flame or spark, will cause fire or explosion. Dust clouds generated by the fine grinding of the solid are a particular hazard; accumulations of fine dust (420 micron or less) may burn rapidly and fiercely if ignited - particles exceeding this limit will generally not form flammable dust clouds; once initiated, however, larger particles up to 1400 microns diameter will contribute to the propagation of an explosion.<br>▸ In the same way as gases and vapours, dusts in the form of a cloud are only ignitable over a range of concentrations; in principle, the concepts of lower explosive limit (LEL) and upper explosive limit (UEL) are applicable to dust clouds but only the LEL is of practical use; - this is because of the inherent difficulty of achieving homogeneous dust clouds at high temperatures (for dusts the LEL is often called the "Minimum Explosible Concentration", MEC).<br>▸ When processed with flammable liquids/vapors/mists,ignitable (hybrid) mixtures may be formed with combustible dusts. Ignitable mixtures will increase the rate of explosion pressure rise and the Minimum Ignition Energy (the minimum amount of energy required to ignite dust clouds - MIE) will be lower than the pure dust in air mixture. The Lower Explosive Limit (LEL) of the vapour/dust mixture will be lower than the individual LELs for the vapors/mists or dusts. |

**Continued...**

| | |
|---|---|
| | ▸ A dust explosion may release of large quantities of gaseous products; this in turn creates a subsequent pressure rise of explosive force capable of damaging plant and buildings and injuring people.<br>▸ Usually the initial or primary explosion takes place in a confined space such as plant or machinery, and can be of sufficient force to damage or rupture the plant. If the shock wave from the primary explosion enters the surrounding area, it will disturb any settled dust layers, forming a second dust cloud, and often initiate a much larger secondary explosion. All large scale explosions have resulted from chain reactions of this type.<br>▸ Dry dust can be charged electrostatically by turbulence, pneumatic transport, pouring, in exhaust ducts and during transport.<br>▸ Build-up of electrostatic charge may be prevented by bonding and grounding.<br>▸ Powder handling equipment such as dust collectors, dryers and mills may require additional protection measures such as explosion venting.<br>▸ All movable parts coming in contact with this material should have a speed of less than 1-meter/sec.<br>▸ A sudden release of statically charged materials from storage or process equipment, particularly at elevated temperatures and/ or pressure, may result in ignition especially in the absence of an apparent ignition source.<br>▸ One important effect of the particulate nature of powders is that the surface area and surface structure (and often moisture content) can vary widely from sample to sample, depending of how the powder was manufactured and handled; this means that it is virtually impossible to use flammability data published in the literature for dusts (in contrast to that published for gases and vapours).<br>▸ Autoignition temperatures are often quoted for dust clouds (minimum ignition temperature (MIT)) and dust layers (layer ignition temperature (LIT)); LIT generally falls as the thickness of the layer increases.<br>Combustion products include; carbon monoxide (CO) carbon dioxide ($CO_2$) silicon dioxide ($SiO_2$) other pyrolysis products typical of burning organic material<br>May emit poisonous fumes.May emit corrosive fumes. |

## 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** | ▸ Clean up all spills immediately.<br>▸ Avoid breathing dust and contact with skin and eyes.<br>▸ Wear protective clothing, gloves, safety glasses and dust respirator.<br>▸ Use dry clean up procedures and avoid generating dust.<br>▸ Sweep up, shovel up or<br>▸ Vacuum up (consider explosion-proof machines designed to be grounded during storage and use).<br>▸ Place spilled material in clean, dry, sealable, labelled container. |
| **Major Spills** | Moderate hazard.<br>▸ **CAUTION**: Advise personnel in area.<br>▸ Alert Emergency Services and tell them location and nature of hazard.<br>▸ Control personal contact by wearing protective clothing.<br>▸ Prevent, by any means available, spillage from entering drains or water courses.<br>▸ Recover product wherever possible.<br>▸ **IF DRY:** Use dry clean up procedures and avoid generating dust. Collect residues and place in sealed plastic bags or other containers for disposal. **IF WET:** Vacuum/shovel up and place in labelled containers for disposal.<br>▸ **ALWAYS:** Wash area down with large amounts of water and prevent runoff into drains.<br>▸ If contamination of drains or waterways occurs, advise Emergency Services. |

### 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** | ▸ Avoid all personal contact, including inhalation.<br>▸ Wear protective clothing when risk of exposure occurs.<br>▸ Use in a well-ventilated area.<br>▸ Prevent concentration in hollows and sumps.<br>▸ **DO NOT** enter confined spaces until atmosphere has been checked.<br>▸ **DO NOT** allow material to contact humans, exposed food or food utensils.<br>▸ Avoid contact with incompatible materials.<br>▸ When handling, **DO NOT** eat, drink or smoke.<br>▸ Keep containers securely sealed when not in use.<br>▸ Avoid physical damage to containers.<br>▸ Always wash hands with soap and water after handling.<br>▸ Work clothes should be laundered separately. Launder contaminated clothing before re-use.<br>▸ Use good occupational work practice.<br>▸ Observe manufacturer's storage and handling recommendations contained within this SDS.<br>▸ Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained. |
| **Fire and explosion protection** | See section 5 |
| **Other information** | Store between 2 and 8 deg C.<br>**Do not** store in direct sunlight.<br>Store in a dry and well ventilated-area, away from heat and sunlight. |

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

| | |
|---|---|
| **Suitable container** | ▸ **DO NOT** repack. Use containers supplied by manufacturer only. |
| **Storage incompatibility** | ▸ Avoid strong acids, bases. |

**Continued...**

### 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 |
|---|---|---|---|---|---|---|
| Not Available | Not Available | Not Available | Not Available | Not Available | Not Available | Not Available |

**EMERGENCY LIMITS**

| Ingredient | Material name | TEEL-1 | TEEL-2 | TEEL-3 |
|---|---|---|---|---|
| Pola Office Powder | Not Available | Not Available | Not Available | Not Available |

| Ingredient | Original IDLH | Revised IDLH |
|---|---|---|
| silicone dioxide powder | Not Available | Not Available |

**MATERIAL DATA**

### 8.2. Exposure controls

**8.2.1. Appropriate engineering controls**

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.
The basic types of engineering controls are:
Process controls which involve changing the way a job activity or process is done to reduce the risk.
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.
Employers may need to use multiple types of controls to prevent employee overexposure.

- Local exhaust ventilation is required where solids are handled as powders or crystals; even when particulates are relatively large, a certain proportion will be powdered by mutual friction.
- Exhaust ventilation should be designed to prevent accumulation and recirculation of particulates in the workplace.
- If in spite of local exhaust an adverse concentration of the substance in air could occur, respiratory protection should be considered. Such protection might consist of:

(a): particle dust respirators, if necessary, combined with an absorption cartridge;
(b): filter respirators with absorption cartridge or canister of the right type;
(c): fresh-air hoods or masks

- Build-up of electrostatic charge on the dust particle, may be prevented by bonding and grounding.
- Powder handling equipment such as dust collectors, dryers and mills may require additional protection measures such as explosion venting.

Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to efficiently remove the contaminant.

| Type of Contaminant: | Air Speed: |
|---|---|
| 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.) |

Within each range the appropriate value depends on:

| 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 |

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 4-10 m/s (800-2000 f/min) for extraction of crusher dusts generated 2 metres 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.

**8.2.2. Personal protection**

**Eye and face protection**

- Safety glasses with side shields.
- Chemical goggles.
- 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

**Continued...**

| | |
|---|---|
| | ▸ 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] |
| **Skin protection** | See Hand protection below |
| **Hands/feet protection** | The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.<br>The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and.has to be observed when making a final choice.<br>Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:<br>▸ frequency and duration of contact,<br>▸ chemical resistance of glove material,<br>▸ glove thickness and<br>▸ dexterity<br>Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739, AS/NZS 2161.1 or national equivalent).<br>▸ When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.<br>▸ When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.<br>▸ Some glove polymer types are less affected by movement and this should be taken into account when considering gloves for long-term use.<br>▸ Contaminated gloves should be replaced.<br>Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended. |
| **Body protection** | See Other protection below |
| **Other protection** | ▸ Overalls.<br>▸ P.V.C. apron.<br>▸ Barrier cream.<br>▸ Skin cleansing cream.<br>▸ Eye wash unit. |
| **Thermal hazards** | Not Available |

### Respiratory protection

Particulate. (AS/NZS 1716 & 1715, EN 143:000 & 149:001, ANSI Z88 or national equivalent)

| Required Minimum Protection Factor | Half-Face Respirator | Full-Face Respirator | Powered Air Respirator |
|---|---|---|---|
| up to 10 x ES | P1<br>Air-line* | -<br>- | PAPR-P1<br>- |
| up to 50 x ES | Air-line** | P2 | PAPR-P2 |
| up to 100 x ES | - | P3 | - |
| | | Air-line* | - |
| 100+ x ES | - | Air-line** | PAPR-P3 |

* - Negative pressure demand ** - Continuous flow
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(SO2), G = Agricultural chemicals, K = Ammonia(NH3), 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** | Fluffy white speckled powder; insoluble in water. |

| | | | |
|---|---|---|---|
| **Physical state** | Divided Solid | **Relative density (Water = 1)** | Not Available |
| **Odour** | Not Available | **Partition coefficient n-octanol / water** | Not Available |
| **Odour threshold** | Not Available | **Auto-ignition temperature (°C)** | Not Available |
| **pH (as supplied)** | Not Applicable | **Decomposition temperature** | Not Available |
| **Melting point / freezing point (°C)** | Not Available | **Viscosity (cSt)** | Not Applicable |
| **Initial boiling point and boiling range (°C)** | Not Applicable | **Molecular weight (g/mol)** | Not Available |
| **Flash point (°C)** | Not Available | **Taste** | Not Available |
| **Evaporation rate** | Not Applicable | **Explosive properties** | Not Available |
| **Flammability** | Not Available | **Oxidising properties** | Not Available |
| **Upper Explosive Limit (%)** | Not Available | **Surface Tension (dyn/cm or mN/m)** | Not Applicable |
| **Lower Explosive Limit (%)** | Not Available | **Volatile Component (%vol)** | Not Applicable |

**Continued...**

| | | | |
|---|---|---|---|
| **Vapour pressure (kPa)** | Not Applicable | **Gas group** | Not Available |
| **Solubility in water (g/L)** | Immiscible | **pH as a solution (1%)** | Not Available |
| **Vapour density (Air = 1)** | Not Applicable | **VOC g/L** | Not Available |

### 9.2. Other information

Not Available

## SECTION 10 STABILITY AND REACTIVITY

| | |
|---|---|
| **10.1.Reactivity** | See section 7.2 |
| **10.2.Chemical stability** | ▸ Unstable in the presence of incompatible materials.<br>▸ Product is considered stable.<br>▸ Hazardous polymerisation will not occur. |
| **10.3. Possibility of hazardous reactions** | See section 7.2 |
| **10.4. Conditions to avoid** | See section 7.2 |
| **10.5. Incompatible materials** | See section 7.2 |
| **10.6. Hazardous decomposition products** | See section 5.3 |

## SECTION 11 TOXICOLOGICAL INFORMATION

### 11.1. Information on toxicological effects

| | |
|---|---|
| **Inhaled** | 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.<br>Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled.<br>If prior damage to the circulatory or nervous systems has occurred or if kidney damage has been sustained, proper screenings should be conducted on individuals who may be exposed to further risk if handling and use of the material result<br>in excessive exposures.<br><br>Effects on lungs are significantly enhanced in the presence of respirable particles. Overexposure to respirable dust may produce wheezing, coughing and breathing difficulties leading to or symptomatic of impaired respiratory function. |
| **Ingestion** | The material has **NOT** been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence. The material may still be damaging to the health of the individual, following ingestion, especially where pre-existing organ (e.g liver, kidney) damage is evident. Present definitions of harmful or toxic substances are generally based on doses producing mortality rather than those producing morbidity (disease, ill-health). Gastrointestinal tract discomfort may produce nausea and vomiting. In an occupational setting however, ingestion of insignificant quantities is not thought to be cause for concern.<br><br>Not normally a hazard due to the physical form of product. The material is a physical irritant to the gastro-intestinal tract |
| **Skin Contact** | 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.<br>The material may accentuate any pre-existing dermatitis condition<br>Open cuts, abraded or irritated skin should not be exposed to this material<br>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** | Evidence exists, or practical experience predicts, that the material may cause 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.<br>Repeated or prolonged eye contact may cause inflammation characterised by temporary redness (similar to windburn) of the conjunctiva (conjunctivitis); temporary impairment of vision and/or other transient eye damage/ulceration may occur. |
| **Chronic** | Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems.<br>Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems. |

| | | |
|---|---|---|
| **Pola Office Powder** | **TOXICITY** | **IRRITATION** |
| | Not Available | Not Available |
| ***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* | |

| | | | |
|---|---|---|---|
| **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...**

*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 |
|---|---|---|---|---|---|
| Not Available | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| ***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 |
|---|---|---|
| | No Data available for all ingredients | No Data available for all ingredients |

### 12.3. Bioaccumulative potential

| Ingredient | Bioaccumulation |
|---|---|
| | No Data available for all ingredients |

### 12.4. Mobility in soil

| Ingredient | Mobility |
|---|---|
| | No Data available for all ingredients |

### 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

| | |
|---|---|
| **Product / Packaging disposal** | ▸ **DO NOT** allow wash water from cleaning or process equipment to enter drains.<br>▸ It may be necessary to collect all wash water for treatment before disposal.<br>▸ In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.<br>▸ Where in doubt contact the responsible authority. |
| **Waste treatment options** | Not Available |
| **Sewage disposal options** | Not Available |

## SECTION 14 TRANSPORT INFORMATION

### Labels Required

| | |
|---|---|
| **Marine Pollutant** | NO |
| **HAZCHEM** | Not Applicable |

### Land transport (ADR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

| | |
|---|---|
| **14.1.UN number** | Not Applicable |
| **14.2.Packing group** | Not Applicable |
| **14.3.UN proper shipping name** | Not Applicable |
| **14.4.Environmental hazard** | Not Applicable |
| **14.5. Transport hazard class(es)** | Class: Not Applicable<br>Subrisk: Not Applicable |
| **14.6. Special precautions for user** | Hazard identification (Kemler): Not Applicable<br>Classification code: Not Applicable<br>Hazard Label: Not Applicable<br>Special provisions: Not Applicable |

**Continued...**

| | | |
|---|---|---|
| | Limited quantity | Not Applicable |

**Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS**

| | |
|---|---|
| **14.1. UN number** | Not Applicable |
| **14.2. Packing group** | Not Applicable |
| **14.3. UN proper shipping name** | Not Applicable |
| **14.4. Environmental hazard** | Not Applicable |
| **14.5. Transport hazard class(es)** | ICAO/IATA Class: Not Applicable<br>ICAO / IATA Subrisk: Not Applicable<br>ERG Code: Not Applicable |
| **14.6. Special precautions for user** | Special provisions: Not Applicable<br>Cargo Only Packing Instructions: Not Applicable<br>Cargo Only Maximum Qty / Pack: Not Applicable<br>Passenger and Cargo Packing Instructions: Not Applicable<br>Passenger and Cargo Maximum Qty / Pack: Not Applicable<br>Passenger and Cargo Limited Quantity Packing Instructions: Not Applicable<br>Passenger and Cargo Limited Maximum Qty / Pack: Not Applicable |

**Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS**

| | |
|---|---|
| **14.1. UN number** | Not Applicable |
| **14.2. Packing group** | Not Applicable |
| **14.3. UN proper shipping name** | Not Applicable |
| **14.4. Environmental hazard** | Not Applicable |
| **14.5. Transport hazard class(es)** | IMDG Class: Not Applicable<br>IMDG Subrisk: Not Applicable |
| **14.6. Special precautions for user** | EMS Number: Not Applicable<br>Special provisions: Not Applicable<br>Limited Quantities: Not Applicable |

**Inland waterways transport (ADN): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS**

| | |
|---|---|
| **14.1. UN number** | Not Applicable |
| **14.2. Packing group** | Not Applicable |
| **14.3. UN proper shipping name** | Not Applicable |
| **14.4. Environmental hazard** | Not Applicable |
| **14.5. Transport hazard class(es)** | Not Applicable: Not Applicable |
| **14.6. Special precautions for user** | Classification code: Not Applicable<br>Special provisions: Not Applicable<br>Limited quantity: Not Applicable<br>Equipment required: Not Applicable<br>Fire cones number: Not Applicable |

### 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

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.

**Continued...**

### ECHA SUMMARY

| National Inventory | Status |
|---|---|
| Australia - AICS | Y |
| Canada - DSL | Y |
| Canada - NDSL | Y |
| China - IECSC | Y |
| Europe - EINEC / ELINCS / NLP | Y |
| Japan - ENCS | Y |
| Korea - KECI | Y |
| New Zealand - NZIoC | Y |
| Philippines - PICCS | Y |
| USA - TSCA | Y |
| ***Legend:*** | *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

### Other information

### DSD / DPD label elements

Relevant risk statements are found in section 2.1

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

**SAFETY ADVICE**

| | |
|---|---|
| **S02** | Keep out of reach of children. |
| **S26** | In case of contact with eyes, rinse with plenty of water and contact Doctor or Poisons Information Centre. |
| **S35** | This material and its container must be disposed of in a safe way. |
| **S37** | Wear suitable gloves. |
| **S39** | Wear eye/face protection. |
| **S40** | To clean the floor and all objects contaminated by this material, use water and detergent. |
| **S46** | If swallowed, seek medical advice immediately and show this container or label. |
| **S56** | Dispose of this material and its container at hazardous or special waste collection point. |
| **S64** | 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

**Continued...**

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

Other information:

Prepared by: SDI Limited
3-15 Brunsdon Street, Bayswater Victoria, 3153, Australia

Phone Number: +61 3 8727 7111

Date of preparation/revision: 23rd September 2015

Department issuing SDS: Research and Development

Contact: Technical Director

# Gingival Barrier

**SDI Limited**

Version No: **6.1.1.1**
Safety Data Sheet (Conforms to Regulations (EC) No 2015/830)

Issue Date: **18/03/2016**
Print Date: **23/03/2016**
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** | Gingival Barrier |
| **Synonyms** | Not Available |
| **Other means of identification** | Not Available |

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

| | |
|---|---|
| **Relevant identified uses** | For tissue isolation 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 Brunsdon 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 |
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| **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. Not 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 | |
| **DPD classification [1]** | R43 | May cause SENSITISATION by skin contact. |
| ***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* | |

**Continued...**

| | |
|---|---|
| **Classification according to regulation (EC) No 1272/2008 [CLP] [1]** | Skin Sensitizer 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** | **WARNING** |

**Hazard statement(s)**

| | |
|---|---|
| **H317** | May cause an allergic skin reaction. |

**Supplementary statement(s)**

Not Applicable

**Precautionary statement(s) Prevention**

| | |
|---|---|
| **P280** | Wear protective gloves/protective clothing/eye protection/face protection. |
| **P261** | Avoid breathing dust/fume/gas/mist/vapours/spray. |
| **P272** | Contaminated work clothing should not be allowed out of the workplace. |

**Precautionary statement(s) Response**

| | |
|---|---|
| **P302+P352** | IF ON SKIN: Wash with plenty of water and soap. |
| **P333+P313** | If skin irritation or rash occurs: Get medical advice/attention. |
| **P362+P364** | Take off contaminated clothing and wash it before reuse. |

**Precautionary statement(s) Storage**

Not Applicable

**Precautionary statement(s) Disposal**

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

### 2.3. Other hazards

May produce discomfort of the eyes and skin*.

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.Not Available<br>2.Not Available<br>3.Not Available<br>4.Not Available | 75-85 | 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** | If skin contact occurs:<br>▸ Immediately remove all contaminated clothing, including footwear.<br>▸ Flush skin and hair with running water (and soap if available).<br>▸ Seek medical attention in event of irritation.<br>If this product comes in contact with the eyes:<br>▸ Wash out immediately with fresh running water.<br>▸ 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.<br>▸ Seek medical attention without delay; if pain persists or recurs seek medical attention.<br>▸ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.<br>▸ If fumes, aerosols or combustion products are inhaled remove from contaminated area.<br>▸ Other measures are usually unnecessary.<br>Seek medical attention. |

**Continued...**

| | |
|---|---|
| **Eye Contact** | If this product comes in contact with the eyes:<br>▸ Wash out immediately with fresh running water.<br>▸ 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.<br>▸ Seek medical attention without delay; if pain persists or recurs seek medical attention.<br>▸ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel. |
| **Skin Contact** | If skin contact occurs:<br>▸ Immediately remove all contaminated clothing, including footwear.<br>▸ Flush skin and hair with running water (and soap if available).<br>▸ Seek medical attention in event of irritation. |
| **Inhalation** | ▸ If fumes, aerosols or combustion products are inhaled remove from contaminated area.<br>▸ Other measures are usually unnecessary. |
| **Ingestion** | Seek medical attention. |

### 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

- 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** | ▸ Alert Fire Brigade and tell them location and nature of hazard.<br>▸ Wear breathing apparatus plus protective gloves in the event of a fire.<br>▸ Prevent, by any means available, spillage from entering drains or water courses.<br>▸ Use fire fighting procedures suitable for surrounding area.<br>▸ **DO NOT** approach containers suspected to be hot.<br>▸ Cool fire exposed containers with water spray from a protected location.<br>▸ If safe to do so, remove containers from path of fire.<br>▸ Equipment should be thoroughly decontaminated after use. |
| **Fire/Explosion Hazard** | ▸ The material is not readily combustible under normal conditions.<br>▸ However, it will break down under fire conditions and the organic component may burn.<br>▸ Not considered to be a significant fire risk.<br>▸ Heat may cause expansion or decomposition with violent rupture of containers.<br>▸ Decomposes on heating and may produce toxic fumes of carbon monoxide (CO).<br>▸ May emit acrid smoke.<br>Other decomposition products include; carbon dioxide (CO2)May emit corrosive fumes. |

## 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** | ▸ Clean up all spills immediately.<br>▸ Avoid contact with skin and eyes.<br>▸ Wear impervious gloves and safety goggles.<br>▸ Trowel up/scrape up.<br>▸ Place spilled material in clean, dry, sealed container.<br>▸ Flush spill area with water. |
| **Major Spills** | Minor hazard.<br>▸ Clear area of personnel.<br>▸ Alert Fire Brigade and tell them location and nature of hazard.<br>▸ Control personal contact with the substance, by using protective equipment as required.<br>▸ Prevent spillage from entering drains or water ways.<br>▸ Contain spill with sand, earth or vermiculite.<br>▸ Collect recoverable product into labelled containers for recycling.<br>▸ Absorb remaining product with sand, earth or vermiculite and place in appropriate containers for disposal.<br>▸ Wash area and prevent runoff into drains or waterways.<br>▸ If contamination of drains or waterways occurs, advise emergency services. |

### 6.4. Reference to other sections

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

**Continued...**

## SECTION 7 HANDLING AND STORAGE

### 7.1. Precautions for safe handling

| | |
|---|---|
| **Safe handling** | ▸ Avoid all personal contact, including inhalation.<br>▸ Wear protective clothing when risk of exposure occurs.<br>▸ Use in a well-ventilated area.<br>▸ Prevent concentration in hollows and sumps.<br>▸ **DO NOT** enter confined spaces until atmosphere has been checked.<br>▸ **DO NOT** allow material to contact humans, exposed food or food utensils.<br>▸ Avoid contact with incompatible materials.<br>▸ When handling, **DO NOT** eat, drink or smoke.<br>▸ Keep containers securely sealed when not in use.<br>▸ Avoid physical damage to containers.<br>▸ Always wash hands with soap and water after handling.<br>▸ Work clothes should be laundered separately. Launder contaminated clothing before re-use.<br>▸ Use good occupational work practice.<br>▸ Observe manufacturer's storage and handling recommendations contained within this SDS.<br>▸ Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained. |
| **Fire and explosion protection** | See section 5 |
| **Other information** | Store between 10 and 25 deg. C.<br>**Do not** store in direct sunlight. |

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

| | |
|---|---|
| **Suitable container** | ▸ **DO NOT** repack. Use containers supplied by manufacturer only.<br>▸ Check that containers are clearly labelled and free from leaks |
| **Storage incompatibility** | ▸ Avoid storage with reducing agents. |

### 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 |
|---|---|---|---|---|---|---|
| Not Available | Not Available | Not Available | Not Available | Not Available | Not Available | Not Available |

**EMERGENCY LIMITS**

| Ingredient | Material name | TEEL-1 | TEEL-2 | TEEL-3 |
|---|---|---|---|---|
| Gingival Barrier | Not Available | Not Available | Not Available | Not Available |

| Ingredient | Original IDLH | Revised IDLH |
|---|---|---|
| acrylic monomer | Not Available | Not Available |

**MATERIAL DATA**

### 8.2. Exposure controls

**8.2.1. Appropriate engineering controls**

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.
The basic types of engineering controls are:
Process controls which involve changing the way a job activity or process is done to reduce the risk.
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.
Employers may need to use multiple types of controls to prevent employee overexposure.

General exhaust is adequate under normal operating conditions. Local exhaust ventilation may be required in specific circumstances. If risk of overexposure exists, wear approved respirator. Correct fit is essential to obtain adequate protection. Provide adequate ventilation in warehouse or closed 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.

| 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.) |

**Continued...**

| | |
|---|---|
| | 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.)<br>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.) |

Within each range the appropriate value depends on:

| 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 |

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.

| | |
|---|---|
| **8.2.2. Personal protection** |  |
| **Eye and face protection** | No special equipment for minor exposure i.e. when handling small quantities.<br>OTHERWISE:<br>▸ Safety glasses with side shields.<br>▸ 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] |
| **Skin protection** | See Hand protection below |
| **Hands/feet protection** | ▸ Wear chemical protective gloves, e.g. PVC.<br>▸ Wear safety footwear or safety gumboots, e.g. Rubber<br>▸ Rubber Gloves |
| **Body protection** | See Other protection below |
| **Other protection** | No special equipment needed when handling small quantities.<br>**OTHERWISE:**<br>▸ Overalls.<br>▸ Barrier cream.<br>▸ Eyewash unit. |
| **Thermal hazards** | Not Available |

### 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** | Blue coloured viscous/ flowable paste with ester-like odour. |

| | | | |
|---|---|---|---|
| **Physical state** | Free-flowing Paste | **Relative density (Water = 1)** | Not Available |
| **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 |
| **Melting point / freezing point (°C)** | Not Available | **Viscosity (cSt)** | Not Available |
| **Initial boiling point and boiling range (°C)** | Not Available | **Molecular weight (g/mol)** | Not Applicable |
| **Flash point (°C)** | Not Available | **Taste** | Not Available |
| **Evaporation rate** | Not Available | **Explosive properties** | Not Available |
| **Flammability** | Not Available | **Oxidising properties** | Not Available |
| **Upper Explosive Limit (%)** | Not Available | **Surface Tension (dyn/cm or mN/m)** | Not Available |
| **Lower Explosive Limit (%)** | Not Available | **Volatile Component (%vol)** | Not Available |
| **Vapour pressure (kPa)** | Not Available | **Gas group** | Not Available |
| **Solubility in water (g/L)** | Not Available | **pH as a solution (1%)** | Not Available |

**Continued...**

| | | | |
|---|---|---|---|
| **Vapour density (Air = 1)** | Not Available | **VOC g/L** | Not Available |

### 9.2. Other information

Not Available

## SECTION 10 STABILITY AND REACTIVITY

| | |
|---|---|
| **10.1.Reactivity** | See section 7.2 |
| **10.2.Chemical stability** | Product is considered stable and hazardous polymerisation will not occur. |
| **10.3. Possibility of hazardous reactions** | See section 7.2 |
| **10.4. Conditions to avoid** | See section 7.2 |
| **10.5. Incompatible materials** | See section 7.2 |
| **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 or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, 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 has **NOT** been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence. The material may still be damaging to the health of the individual, following ingestion, especially where pre-existing organ (e.g liver, kidney) damage is evident. Present definitions of harmful or toxic substances are generally based on doses producing mortality rather than those producing morbidity (disease, ill-health). Gastrointestinal tract discomfort may produce nausea and vomiting. In an occupational setting however, ingestion of insignificant quantities is not thought to be cause for concern. |
| **Skin Contact** | Limited 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. |
| **Eye** | Limited evidence exists, or practical experience suggests, that the material may cause eye irritation in a substantial number of individuals and/or is expected to produce significant ocular lesions which are present twenty-four hours or more after instillation into the eye(s) of experimental animals. Repeated or prolonged eye contact may cause inflammation characterised by temporary redness (similar to windburn) of the conjunctiva (conjunctivitis); temporary impairment of vision and/or other transient eye damage/ulceration may occur. |
| **Chronic** | There exists limited evidence that shows that skin contact with the material is capable either of inducing a sensitisation reaction in a significant number of individuals, and/or of producing positive response in experimental animals. |

| | | |
|---|---|---|
| **Gingival Barrier** | **TOXICITY** | **IRRITATION** |
| | Not Available | Not Available |
| ***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* | |

| | | | |
|---|---|---|---|
| **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 |
|---|---|---|---|---|---|
| **Not Available** | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| ***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 |
|---|---|---|

**Continued...**

| | | |
|---|---|---|
| | No Data available for all ingredients | No Data available for all ingredients |

### 12.3. Bioaccumulative potential

| Ingredient | Bioaccumulation |
|---|---|
| | No Data available for all ingredients |

### 12.4. Mobility in soil

| Ingredient | Mobility |
|---|---|
| | No Data available for all ingredients |

### 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

| | |
|---|---|
| **Product / Packaging disposal** | Consult State Land Waste Management Authority for disposal.<br>Bury residue in an authorised landfill. |
| **Waste treatment options** | Not Available |
| **Sewage disposal options** | Not Available |

## SECTION 14 TRANSPORT INFORMATION

### Labels Required

| | |
|---|---|
| **Marine Pollutant** | NO |
| **HAZCHEM** | Not Applicable |

### Land transport (ADR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

| | |
|---|---|
| **14.1.UN number** | Not Applicable |
| **14.2.Packing group** | Not Applicable |
| **14.3.UN proper shipping name** | Not Applicable |
| **14.4.Environmental hazard** | Not Applicable |
| **14.5. Transport hazard class(es)** | Class: Not Applicable<br>Subrisk: Not Applicable |
| **14.6. Special precautions for user** | Hazard identification (Kemler): Not Applicable<br>Classification code: Not Applicable<br>Hazard Label: Not Applicable<br>Special provisions: Not Applicable<br>Limited quantity: Not Applicable |

### Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

| | |
|---|---|
| **14.1. UN number** | Not Applicable |
| **14.2. Packing group** | Not Applicable |
| **14.3. UN proper shipping name** | Not Applicable |
| **14.4. Environmental hazard** | Not Applicable |
| **14.5. Transport hazard class(es)** | ICAO/IATA Class: Not Applicable<br>ICAO / IATA Subrisk: Not Applicable<br>ERG Code: Not Applicable |
| **14.6. Special precautions for user** | Special provisions: Not Applicable<br>Cargo Only Packing Instructions: Not Applicable<br>Cargo Only Maximum Qty / Pack: Not Applicable<br>Passenger and Cargo Packing Instructions: Not Applicable |

**Continued...**

| | | |
|---|---|---|
| | Passenger and Cargo Maximum Qty / Pack | Not Applicable |
| | Passenger and Cargo Limited Quantity Packing Instructions | Not Applicable |
| | Passenger and Cargo Limited Maximum Qty / Pack | Not Applicable |

**Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS**

| | |
|---|---|
| **14.1. UN number** | Not Applicable |
| **14.2. Packing group** | Not Applicable |
| **14.3. UN proper shipping name** | Not Applicable |
| **14.4. Environmental hazard** | Not Applicable |
| **14.5. Transport hazard class(es)** | IMDG Class: Not Applicable<br>IMDG Subrisk: Not Applicable |
| **14.6. Special precautions for user** | EMS Number: Not Applicable<br>Special provisions: Not Applicable<br>Limited Quantities: Not Applicable |

**Inland waterways transport (ADN): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS**

| | |
|---|---|
| **14.1. UN number** | Not Applicable |
| **14.2. Packing group** | Not Applicable |
| **14.3. UN proper shipping name** | Not Applicable |
| **14.4. Environmental hazard** | Not Applicable |
| **14.5. Transport hazard class(es)** | Not Applicable \| Not Applicable |
| **14.6. Special precautions for user** | Classification code: Not Applicable<br>Special provisions: Not Applicable<br>Limited quantity: Not Applicable<br>Equipment required: Not Applicable<br>Fire cones number: Not Applicable |

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

Not Applicable

## SECTION 15 REGULATORY INFORMATION

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

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

| National Inventory | Status |
|---|---|
| Australia - AICS | Y |
| Canada - DSL | Y |
| Canada - NDSL | Y |
| China - IECSC | Y |
| Europe - EINEC / ELINCS / NLP | Y |
| Japan - ENCS | Y |
| Korea - KECI | Y |
| New Zealand - NZIoC | Y |
| Philippines - PICCS | Y |
| USA - TSCA | Y |
| ***Legend:*** | *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

**Continued...**

### Full text Risk and Hazard codes

### Other information

### DSD / DPD label elements

Relevant risk statements are found in section 2.1

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

**SAFETY ADVICE**

| | |
|---|---|
| **S02** | Keep out of reach of children. |
| **S23** | Do not breathe gas/fumes/vapour/spray. |
| **S24** | Avoid contact with skin. |
| **S35** | This material and its container must be disposed of in a safe way. |
| **S37** | Wear suitable gloves. |
| **S40** | To clean the floor and all objects contaminated by this material, use water and detergent. |
| **S46** | If swallowed, seek medical advice immediately and show this container or label. |
| **S56** | Dispose of this material and its container at hazardous or special waste collection point. |

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.

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**end of SDS**