

**Safety Data Sheet
ZETA 3 WIPES TOTAL****Revision nr. 6
Dated 25/10/2022****SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Mixture identification:
Product Name: ZETA 3 WIPES TOTAL
Code: C810062, C810063

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

For professional use only. Wipes for disinfection of surfaces of medical devices.

1.3. Details of the supplier of the safety data sheet

Name
Zhermack S.p.a
Via Bovazecchino 100
45021 Badia Polesine (RO)
Italy
tel. +39 0425-597611
fax +39 0425-597689

Competent person responsible for the safety data sheet:
msds@zhermack.com

1.4. Emergency telephone number

UK Emergency number: 999 (24 hours)

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture**

EC regulation criteria 1272/2008 (CLP)

Flam. Liq. 3, H226 Flammable liquid and vapour.
Eye Irrit. 2, H319 Causes serious eye irritation.

Adverse physicochemical, human health and environmental effects:
No other hazards

2.2. Label elements

Hazard pictograms:



Warning

Hazard statements:

H226 Flammable liquid and vapour.
H319 Causes serious eye irritation.

Precautionary statements:

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.
P264 Wash hands thoroughly after handling.
P280 Wear protective gloves.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 If eye irritation persists: Get medical advice/attention.

Special Provisions:

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EUH208 Contains (R)-p-mentha-1,8-diene; d-limonene. May produce an allergic reaction.

Special provisions according to Annex XVII of REACH and subsequent amendments:
None

2.3. Other hazards

No PBT, vPvB or endocrine disruptor substances present in concentration $\geq 0.1\%$

Other Hazards:

No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

Not Applicable

3.2. Mixtures

Hazardous components within the meaning of the CLP regulation and related classification:

Qty	Name	Ident. Number	Classification
$\geq 30\%$ - $< 40\%$	ethanol; ethyl alcohol	Index number: 603-002-00-5 CAS: 64-17-5 EC: 200-578-6 REACH No.: 01-21194576 10-43-XXXX	Flam. Liq. 2 H225 Highly flammable liquid and vapour. Eye Irrit. 2 H319 Causes serious eye irritation.
$\geq 10\%$ - $< 12,5\%$	propan-2-ol; isopropyl alcohol; isopropanol	Index number: 603-117-00-0 CAS: 67-63-0 EC: 200-661-7 REACH No.: 01-21194575 58-25-XXXX	STOT SE 3 H336 May cause drowsiness or dizziness. Flam. Liq. 2 H225 Highly flammable liquid and vapour. Eye Irrit. 2 H319 Causes serious eye irritation.
$\geq 0,1\%$ - $< 0,3\%$	(R)-p-mentha-1,8-diene; d-limonene	Index number: 601-096-00-2 CAS: 5989-27-5 EC: 227-813-5 REACH No.: 01-21195292 23-47-XXXX	Skin Sens. 1B H317 May cause an allergic skin reaction. Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects. Asp. Tox. 1 H304 May be fatal if swallowed and enters airways. Aquatic Acute 1 H400 Very toxic to aquatic life. M=1. Flam. Liq. 3 H226 Flammable liquid and vapour. Skin Irrit. 2 H315 Causes skin irritation.
$\geq 0,1\%$ - $< 0,3\%$	Reaction mass of [[(2-hydroxyethyl)imino]bis(methylene)]bisphosphonic acid and phosphonic acid,-[(tetrahydro-2-hydroxy-2-oxido-4H-1,4,2-oxazaphosphorin-4-yl)methyl-]	REACH No.: 01-21199720 17-37-XXXX	Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects. Met. Corr. 1 H290 May be corrosive to metals. Acute Tox. 3 H301 Toxic if swallowed. Skin Corr. 1A H314 Causes severe skin burns and eye damage.

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<0,1%	Hydrogen chloride	Index number: 017-002-01-X CAS: 7647-01-0 EC: 231-595-7 REACH No.: 01-21194848 62-27-XXXX	LD50: 250 mg/kg STOT SE 3 H335 May cause respiratory irritation. Met. Corr. 1 H290 May be corrosive to metals. Skin Corr. 1B H314 Causes severe skin burns and eye damage. Specific Concentration Limits: C >= 10%: STOT SE 3 H335 C >= 25%: Skin Corr. 1B H314 10% <= C < 25%: Skin Irrit. 2 H315 10% <= C < 25%: Eye Irrit. 2 H319
<0,1%	Diphenyl ether	CAS: 101-84-8 EC: 202-981-2 REACH No.: 01-21194725 45-33-XXXX	Aquatic Acute 1 H400 Very toxic to aquatic life. M=1. Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects. Eye Irrit. 2 H319 Causes serious eye irritation.

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap. Wash thoroughly the body (shower or bath).

Remove contaminated clothing immediately and dispose off safely.

After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

Protect uninjured eye.

In case of Ingestion:

Do not under any circumstances induce vomiting. OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

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

None

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment:

None

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

CO2 or Dry chemical fire extinguisher.

Extinguishing media which must not be used for safety reasons:

None in particular.

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5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.
Burning produces heavy smoke.

5.3. Advice for firefighters

Use suitable breathing apparatus .
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non emergency personnel:
Wear personal protection equipment.
Remove all sources of ignition.
Remove persons to safety.
See protective measures under point 7 and 8.
For emergency responders:
Wear personal protection equipment.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.
Retain contaminated washing water and dispose it.
In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.
Suitable material for taking up: absorbing material, organic, sand

6.3. Methods and material for containment and cleaning up

Wash with plenty of water.

6.4. Reference to other sections

See also section 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.
Don't use empty container before they have been cleaned.
Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.
See also section 8 for recommended protective equipment.
Advice on general occupational hygiene:
Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Store at below 20 °C. Keep away from unguarded flame and heat sources. Avoid direct exposure to sunlight.
Keep away from unguarded flame, sparks, and heat sources. Avoid direct exposure to sunlight.
Keep away from food, drink and feed.
Incompatible materials:
See section 10.5.
Instructions as regards storage premises:
Cool and adequately ventilated.

7.3. Specific end use(s)

See section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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ethanol; ethyl alcohol - CAS: 64-17-5

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OEL Type	TWA		Duration	STEL		Duration	Notes	Country
TLV-ACGIH				1884 mg/m3	1000 ppm	15min	A3 - URT irr	
MAK	1900 mg/m3	1000 ppm	8h	3800 mg/m3	2000 ppm	15min		AUSTRIA
VLEP	1907 mg/m3	1000 ppm	8h					BELGIUM
TLV	1000 mg/m3		8h					BULGARIA
TLV	1000 mg/m3		8h	3000 mg/m3		15min		CZECH REPUBLIC
AGW	960 mg/m3	500 ppm	8h	1920 mg/m3	1000 ppm	15min		GERMANY
MAK	960 mg/m3	500 ppm	8h	1920 mg/m3	1000 ppm	15min		GERMANY
TLV	1900 mg/m3	1000 ppm	8h					DENMARK
VLA				1910 mg/m3	1000 ppm	15min		SPAIN
TLV	1000 mg/m3	500 ppm	8h	1900 mg/m3	1000 ppm	15min		ESTONIA
VLEP	1900 mg/m3	1000 ppm	8h	9500 mg/m3	5000 ppm	15min		FRANCE
HTP	1900 mg/m3	1000 ppm	8h	2500 mg/m3	1300 ppm	15min		FINLAND
TLV	1900 mg/m3	1000 ppm	8h					GREECE
AK	1900 mg/m3		8h	7600 mg/m3		15min		HUNGARY
GVI/KGVI	1900 mg/m3	1000 ppm	8h					CROATIA
OELV					1000 ppm	15min		IRELAND
RD	1000 mg/m3	500 ppm	8h	1900 mg/m3	1000 ppm	15min		LITHUANIA
RV	1000 mg/m3		8h					LATVIA
TLV	950 mg/m3	500 ppm	8h					NORWAY
TGG	260 mg/m3		8h	1900 mg/m3		15min	Skin	NETHERLANDS
NDS/NDSch	1900 mg/m3		8h					POLAND
NGV/KGV	1000 mg/m3	500 ppm	8h	1900 mg/m3	1000 ppm	15min		SWEDEN
NPEL	960 mg/m3	500 ppm	8h	1920 mg/m3		15min		SLOVAKIA (Slovak Republic)
WEL	1920 mg/m3	1000 ppm	8h					UNITED KINGDOM
ACGIH					1000 ppm		A3 - URT irr	

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propan-2-ol; isopropyl alcohol; isopropanol - CAS: 67-63-0

OEL Type	TWA		Duration	STEL		Duration	Notes	Country
AGW	500 mg/m ³	200 ppm	8h	1000 mg/m ³	400 ppm	15min		GERMANY
MAK	500 mg/m ³	200 ppm	8h	1000 mg/m ³	400 ppm	15min		GERMANY
MAK	500 mg/m ³	200 ppm	8h	1000 mg/m ³	400 ppm	15min		SWITZERLAND
VME/VLE	500 mg/m ³	200 ppm	8h	1000 mg/m ³	400 ppm	15min		SWITZERLAND
MV	500 mg/m ³	200 ppm	8h	2000 mg/m ³	800 ppm	15min		SLOVENIA
AK	500 mg/m ³		8h	2000 mg/m ³		15min	Skin	HUNGARY
GVI/KGVI	999 mg/m ³	400 ppm	8h	1250 mg/m ³	500 ppm	15min		CROATIA
MAK	500 mg/m ³	200 ppm	8h	2000 mg/m ³	800 ppm	15min		AUSTRIA
NDS/NDSch	900 mg/m ³		8h	1200 mg/m ³		15min	Skin	POLAND
NGV/KGV	350 mg/m ³	150 ppm	8h	Ceiling 600 mg/m ³	Ceiling 250 ppm	15min		SWEDEN
NPEL	500 mg/m ³	200 ppm	8h	1000 mg/m ³	400 ppm	15min		SLOVAKIA (Slovak Republic)
OELV		200 ppm	8h		400 ppm	15min	Skin	IRELAND
RD	350 mg/m ³	150 ppm	8h	600 mg/m ³	250 ppm	15min		LITHUANIA
RV	350 mg/m ³		8h	600 mg/m ³		15min		LATVIA
TGG	650 mg/m ³		8h					NETHERLANDS
TLV	350 mg/m ³	150 ppm	8h	600 mg/m ³	250 ppm	15min		ESTONIA
TLV	245 mg/m ³	100 ppm	8h					NORWAY
TLV	200 mg/m ³	81 ppm	8h	500 mg/m ³	203 ppm	15min		ROMANIA
TLV	500 mg/m ³	203.5 ppm	8h	1000 mg/m ³	407 ppm	15min		CZECH REPUBLIC
TLV	490 mg/m ³	200 ppm	8h					DENMARK
TLV	980 mg/m ³		8h	1225 mg/m ³		15min		BULGARIA
TLV	980 mg/m ³	400 ppm	8h	1225 mg/m ³	500 ppm	15min		GREECE
TLV-ACGIH		200 ppm	8h		400 ppm	15min		
VLEP				980	400	15min		FRANCE

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				mg/m3	ppm			
VLEP	500 mg/m3	200 ppm	8h	1000 mg/m3	400 ppm	15min		BELGIUM
WEL	999 mg/m3	400 ppm	8h	1250 mg/m3	500 ppm	15min		UNITED KINGDOM
VLA	500 mg/m3	200 ppm	8h	1000 mg/m3	400 ppm	15min		SPAIN
ACGIH		200 ppm	8h		400 ppm		A4, BEI - Eye and URT irr, CNS impair	

(R)-p-mentha-1,8-diene; d-limonene - CAS: 5989-27-5

OEL Type	TWA		Duratio n	STEL		Duratio n	Notes	Country
AGW	28 mg/m3	5 ppm	8h	112 mg/m3	20 ppm	15min		GERMANY
MAK	28 mg/m3	5 ppm	8h	110 mg/m3	20 ppm	15min		GERMANY
HTP	140 mg/m3	25 ppm	8h	280 mg/m3	50 ppm	15min		FINLAND
MAK	40 mg/m3	7 ppm	8h	80 mg/m3	14 ppm	15min		SWITZERLA ND

Reaction mass of [[(2-hydroxyethyl)imino]bis(methylene)]bisphosphonic acid and phosphonic acid,-[(tetrahydro-2-hydroxy-2-oxido-4H-1,4,2-oxazaphosphorin-4-yl)methyl-]

OEL Type	TWA		Duratio n	STEL		Duratio n	Notes	Country
No data available								

Hydrogen chloride - CAS: 7647-01-0

OEL Type	TWA		Duratio n	STEL		Duratio n	Notes	Country
EU	8 mg/m3	5 ppm	8h	15 mg/m3	10 ppm			
HTP				7.6 mg/m3	5 ppm	15min		FINLAND
AGW	3 mg/m3	2 ppm	8h	6 mg/m3	4 ppm	15min		GERMANY
OELV	8 mg/m3	5 ppm	8h	15 mg/m3	10 ppm	15min		IRELAND
VLEP	8 mg/m3	5 ppm	8h	15 mg/m3	10 ppm	15min		ITALY
RV	8 mg/m3	5 ppm	8h	15 mg/m3	10 ppm	15min		LATVIA
TLV	8 mg/m3	5 ppm	8h	15 mg/m3	10 ppm	15min		ROMANIA
NGV/KGV	3 mg/m3	2 ppm	8h	6 mg/m3	4 ppm	15min		SWEDEN
ACGIH					Ceiling		A4 - URT	

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					2 ppm		irr	
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Diphenyl ether - CAS: 101-84-8

OEL Type	TWA		Duratio n	STEL		Duratio n	Notes	Country
AGW	7.1 mg/m ³	1 ppm	8h	7.1 mg/m ³	1 ppm	15min	Inhalable	GERMANY
MAK	7.1 mg/m ³	1 ppm	8h	7.1 mg/m ³	1 ppm	15min	Inhalable	GERMANY
OELV	7 mg/m ³	1 ppm	8h					IRELAND
NDS/NDSch	7 mg/m ³		8h	14 mg/m ³		15min		POLAND
TLV	5 mg/m ³	0.7 ppm	8h	10 mg/m ³	1.4 ppm	15min		ROMANIA
VLA	7.1 mg/m ³	1 ppm	8h	14.2 mg/m ³	2 ppm	15min		SPAIN
MAK	7 mg/m ³	1 ppm	8h	7 mg/m ³	1 ppm	15min		SWITZERLA ND
WEL	7.1 mg/m ³	1 ppm	8h					UNITED KINGDOM
VLEP	7 mg/m ³	1 ppm	8h	14 mg/m ³	2 ppm	15min		BELGIUM
MAK	7 mg/m ³	1 ppm	8h					AUSTRIA
TLV	7 mg/m ³	1 ppm	8h	14 mg/m ³	2 ppm	15min		DENMARK
EU	7 mg/m ³	1 ppm	8h	14 mg/m ³	2 ppm			
HTP	7 mg/m ³	1 ppm	8h	21 mg/m ³	3 ppm	15min		FINLAND
VLEP	7 mg/m ³	1 ppm	8h					FRANCE
ACGIH		1 ppm	8h		2 ppm		(V) - URT and eye irr, nausea	

DNEL Exposure Limit Values

ethanol; ethyl alcohol - CAS: 64-17-5

Consumer: 87 mg/kg bw/d - Exposure: Human Oral - Frequency: Long Term, systemic effects

Consumer: 114 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Consumer: 206 mg/kg bw/d - Exposure: Human Dermal - Frequency: Long Term, systemic effects

Worker Professional: 950 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Worker Professional: 343 mg/kg bw/d - Exposure: Human Dermal - Frequency: Long Term, systemic effects

propan-2-ol; isopropyl alcohol; isopropanol - CAS: 67-63-0

Consumer: 319 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects

Consumer: 89 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

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Consumer: 26 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects

Worker Professional: 888 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects

Worker Professional: 500 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

(R)-p-mentha-1,8-diene; d-limonene - CAS: 5989-27-5

Consumer: 4.8 mg/kg/d - Exposure: Human Oral - Frequency: Long Term, systemic effects

Consumer: 16.6 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Worker Professional: 66.7 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Consumer: 4.8 mg/kg bw/d - Exposure: Human Dermal - Frequency: Short Term, systemic effects

Worker Professional: 9.5 mg/kg bw/d - Exposure: Human Dermal - Frequency: Short Term, systemic effects

Reaction mass of [[(2-hydroxyethyl)imino]bis(methylene)]bisphosphonic acid and phosphonic acid,-[(tetrahydro-2-hydroxy-2-oxido-4H-1,4,2-oxazaphosphorin-4-yl)methyl-]

Consumer: 1.3 mg/kg bw/d - Exposure: Human Oral - Frequency: Short Term, systemic effects

Consumer: 1.3 mg/kg bw/d - Exposure: Human Oral - Frequency: Long Term, systemic effects

Consumer: 2.3 mg/m³ - Exposure: Human Inhalation - Frequency: Short Term, systemic effects

Consumer: 2.3 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Worker Professional: 9.4 mg/m³ - Exposure: Human Inhalation - Frequency: Short Term, systemic effects

Worker Professional: 9.4 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Consumer: 1.3 mg/kg bw/d - Exposure: Human Dermal - Frequency: Short Term, systemic effects

Consumer: 1.3 mg/kg bw/d - Exposure: Human Dermal - Frequency: Long Term, systemic effects

Worker Professional: 2.7 mg/kg bw/d - Exposure: Human Dermal - Frequency: Short Term, systemic effects

Worker Professional: 2.7 mg/kg bw/d - Exposure: Human Dermal - Frequency: Long Term, systemic effects

Diphenyl ether - CAS: 101-84-8

Worker Professional: 7 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, local effects

Worker Professional: 59 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Worker Professional: 25 mg/kg bw/d - Exposure: Human Dermal - Frequency: Long Term, systemic effects

PNEC Exposure Limit Values

ethanol; ethyl alcohol - CAS: 64-17-5

Target: intermittent release - Value: 2.75 mg/l

Target: Microorganisms in sewage treatments - Value: 580 mg/l

Target: Fresh Water - Value: 0.96 mg/l

Target: Marine water - Value: 0.79 mg/l

Target: Freshwater sediments - Value: 3.6 mg/kg

Target: Marine water sediments - Value: 2.9 mg/kg

Target: Food chain - Value: 0.72 mg/kg

Target: Soil (agricultural) - Value: 0.63 mg/kg

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propan-2-ol; isopropyl alcohol; isopropanol - CAS: 67-63-0

Value: 552 mg/kg

Target: Soil (agricultural) - Value: 28 mg/kg

Target: Fresh Water - Value: 140.9 mg/l

Target: Marine water - Value: 140.9 mg/l

Target: Freshwater sediments - Value: 552 mg/kg

(R)-p-mentha-1,8-diene; d-limonene - CAS: 5989-27-5

Target: Fresh Water - Value: 0.014 mg/l

Target: Marine water - Value: 0.0014 mg/l

Target: Freshwater sediments - Value: 3.85 mg/kg

Target: Marine water sediments - Value: 0.385 mg/kg

Target: Microorganisms in sewage treatments - Value: 1.8 mg/l

Target: Soil (agricultural) - Value: 0.763 mg/kg

Target: Food chain - Value: 133 mg/kg

Reaction mass of [[(2-hydroxyethyl)imino]bis(methylene)]bisphosphonic acid and phosphonic acid, -[(tetrahydro-2-hydroxy-2-oxido-4H-1,4,2-oxazaphosphorin-4-yl)methyl-]

Target: Fresh Water - Value: 0.032 mg/l

Target: Marine water - Value: 0.003 mg/l

Target: Freshwater sediments - Value: 8.9 mg/kg

Target: Marine water sediments - Value: 0.89 mg/kg

Target: intermittent release - Value: 0.32 mg/l

Target: Microorganisms in sewage treatments - Value: 46 mg/l

Target: Soil (agricultural) - Value: 3.5 mg/kg

Diphenyl ether - CAS: 101-84-8

Target: Fresh Water - Value: 0 mg/l

Target: Marine water - Value: 0 mg/l

Target: Freshwater sediments - Value: 0.093 mg/kg

Target: Marine water sediments - Value: 0.009 mg/kg

Target: intermittent release - Value: 0.005 mg/l

Target: Microorganisms in sewage treatments - Value: 10 mg/l

Target: Soil (agricultural) - Value: 0.018 mg/kg

Biological Exposure Index

propan-2-ol; isopropyl alcohol; isopropanol - CAS: 67-63-0

Value: 40 mg/L - Biological Indicator: Acetone in urine - Sampling Period: End of turn;

End of working week

8.2. Exposure controls

Precautionary measures:

Give adequate ventilation to the premises where the product is stored and/or handled.

Eye protection:

Wear airtight protective goggles (EN 166).

Protection for skin:

Wear professional overalls and safety footwear (EN 14605).

Protection for hands:

Protect hands with work gloves (EN 374).

The following should be considered when choosing work glove material (EN 374):

compatibility, degradation, failure time and permeability.

The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

Respiratory protection:

Use respiratory protection where ventilation is insufficient or exposure is prolonged.

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered (e.g. TLV-TWA).

Thermal Hazards:

None

Environmental exposure controls:

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None
 Appropriate engineering controls:
 None

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Method:	Notes
Physical state:	Wipes	--	--
Colour:	White	--	--
Odour:	Characteristic	--	--
Melting point/freezing point:	Not available	--	--
Boiling point or initial boiling point and boiling range:	81°C	Regulation (EC) No. 440/2008, Annex, A.2	--
Flammability:	Flam. Liq. 3, H226	--	--
Lower and upper explosion limit:	Not available	--	--
Flash point:	25°C ° C	EN ISO 2719	--
Auto-ignition temperature:	Not available	--	--
Decomposition temperature:	Not Relevant	--	--
pH:	5-7	--	--
Kinematic viscosity:	Not available	--	--
Solubility in water:	Not Relevant	--	--
Solubility in oil:	Not available	--	--
Partition coefficient n-octanol/water (log value):	Not available	--	--
Vapour pressure:	Not available	--	--
Density and/or relative density:	Not available	--	--
Relative vapour density:	Not available	--	--
Particle characteristics:			
Particle size:	Not available	--	--

9.2. Other information

No other relevant information

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions

10.2. Chemical stability

Stable under normal conditions

10.3. Possibility of hazardous reactions

The vapours may also form explosive mixtures with the air.

10.4. Conditions to avoid

Avoid bunching of electrostatic charges.
 Avoid all sources of ignition.

10.5. Incompatible materials

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Avoid contact with combustible materials. The product could catch fire.

10.6. Hazardous decomposition products

None.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Toxicological information of the product:

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- a) acute toxicity
Not classified

- b) skin corrosion/irritation
Not classified

- c) serious eye damage/irritation
The product is classified: Eye Irrit. 2 H319
- d) respiratory or skin sensitisation
Not classified

- e) germ cell mutagenicity
Not classified

- f) carcinogenicity
Not classified

- g) reproductive toxicity
Not classified

- h) STOT-single exposure
Not classified

- i) STOT-repeated exposure
Not classified

- j) aspiration hazard
Not classified

Toxicological information of the main substances found in the product:

ethanol; ethyl alcohol - CAS: 64-17-5

- a) acute toxicity:
Test: LC50 - Route: Inhalation - Species: Rat 117 mg/l - Duration: 4h - Source: (similar to OECD 403, ECHA dossier).
Test: LD50 - Route: Oral - Species: Rat 10470 mg/kg - Source: (OECD 401, ECHA dossier).
- b) skin corrosion/irritation:
Species: Rabbit - Based on available data, the classification criteria are not met - Source: (OECD 404, ECHA dossier).
- c) serious eye damage/irritation:
Species: Rabbit - Eye Irritant - Source: (OECD 405, ECHA dossier).
- d) respiratory or skin sensitisation:
Test: Skin Sensitization - Species: Guinea pig - Based on available data, the classification criteria are not met - Source: (similar to OECD 406, ECHA dossier).
- e) germ cell mutagenicity:
Test: In vitro - Negative - Source: (ECHA dossier).

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- Test: In vivo - Negative - Source: (ECHA dossier).
propan-2-ol; isopropyl alcohol; isopropanol - CAS: 67-63-0
- a) acute toxicity:
Test: LD50 - Route: Skin - Species: Rabbit > 2000 mg/kg - Source: (MSDS supplier).
Test: LC50 - Route: Inhalation - Species: Rat > 20 mg/l - Duration: 4h - Source: (MSDS supplier).
Test: LD50 - Route: Oral - Species: Rat > 2000 mg/kg - Source: (MSDS supplier).
(R)-p-mentha-1,8-diene; d-limonene - CAS: 5989-27-5
- a) acute toxicity:
Test: LD50 - Route: Oral - Species: Rat > 2000 mg/kg - Source: (OECD 423, ECHA dossier).
- b) skin corrosion/irritation:
Species: Rabbit - Skin Irritant - Source: (comparable to OECD 404, in vivo, ECHA dossier).
- c) serious eye damage/irritation:
Species: Rabbit - Based on available data, the classification criteria are not met - Source: (comparable to OECD 404, in vivo, ECHA dossier).
- d) respiratory or skin sensitisation:
Test: Skin Sensitization - Species: Mouse - Positive - Source: (OECD 429, in vivo, Mouse local lymphnode assay, ECHA dossier).
- e) germ cell mutagenicity:
Test: In vitro - Negative - Source: (OECD 476, 473, 479, ECHA dossier).
Test: In vivo - Route: Oral - Species: Rat - Negative - Source: (publication, ECHA dossier).
- f) carcinogenicity:
Species: Rat - Notes: Mechanism of nephrocarcinogenicity male-rat specific. Not relevant for humans. - Positive - Source: (similar to OECD 451, GLP, ECHA dossier).
- g) reproductive toxicity:
Insufficient data
- i) STOT-repeated exposure:
Test: NOAEL - Species: Rat 1650 mg/kg - Source: (similar to OECD 407, GLP, ECHA dossier).
- j) aspiration hazard:
No data available for the product
Reaction mass of [[(2-hydroxyethyl)imino]bis(methylene)]bisphosphonic acid and phosphonic acid, -[(tetrahydro-2-hydroxy-2-oxido-4H-1,4,2-oxazaphosphorin-4-yl)methyl-]
- a) acute toxicity:
Test: LD50 - Route: Skin - Species: Rat > 2246 mg/kg - Source: (OECD 402, ECHA dossier).
Test: LD50 - Route: Oral - Species: Rat 250 mg/kg - Source: (OECD TG 423, GLP, ECHA dossier).
- e) germ cell mutagenicity:
Test: In vitro - Negative - Source: (Ames test, GLP, ECHA dossier).
Diphenyl ether - CAS: 101-84-8
- a) acute toxicity:
Test: LD50 - Route: Oral - Species: Rat > 2000 mg/kg - Source: (ECHA dossier).
- b) skin corrosion/irritation:
Species: Rabbit - Based on available data, the classification criteria are not met - Source: (FIFRA-TSCA, GLP, ECHA dossier).
- c) serious eye damage/irritation:
Species: Rabbit - Eye Irritant - Source: (ECHA dossier).
- d) respiratory or skin sensitisation:
Test: Skin Sensitization - Based on available data, the classification criteria are not met - Source: (epicutaneous test, ECHA dossier).
- e) germ cell mutagenicity:
Test: In vitro - Negative - Source: (ECHA dossier).

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- i) STOT-repeated exposure:
Route: Skin - Species: Rat - Negative - Source: (ECHA dossier).

11.2. Information on other hazards

Endocrine disrupting properties:
No endocrine disruptor substances present in concentration \geq 0.1%

SECTION 12: Ecological information

12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment.

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Not classified for environmental hazards

Based on available data, the classification criteria are not met

ethanol; ethyl alcohol - CAS: 64-17-5

a) Aquatic acute toxicity:

Endpoint: EC50 - Species: Daphnia 857 mg/l - Duration h: 48h (Daphnia magna, ECHA dossier).

Endpoint: LC50 - Species: Fish 11200 mg/l - Duration h: 96h (ECHA dossier).

Endpoint: EC50 - Species: Algae 4432 mg/l - Duration h: 7d (ECHA dossier).

b) Aquatic chronic toxicity:

Endpoint: NOEC - Species: Algae 280 mg/l - Duration h: 7d (ECHA dossier).

propan-2-ol; isopropyl alcohol; isopropanol - CAS: 67-63-0

a) Aquatic acute toxicity:

Endpoint: EC50 - Species: Daphnia > 10000 mg/l - Duration h: 48h (similar to OECD 202, Daphnia magna, ECHA dossier).

Endpoint: LC50 - Species: Fish 9640 mg/l - Duration h: 96h (similar to OECD 203, Pimephales promelas, ECHA dossier).

(R)-p-mentha-1,8-diene; d-limonene - CAS: 5989-27-5

a) Aquatic acute toxicity:

Endpoint: EC50 - Species: Daphnia 0.307 mg/l - Duration h: 48h (OECD 202, Daphnia magna, static, freshwater, ECHA dossier).

Endpoint: LC50 - Species: Fish < 1 mg/l - Duration h: 96h (similar or equivalent to OECD 203, Pimephales promelas, freshwater, ECHA dossier).

Endpoint: IC50 - Species: Algae < 0.32 mg/l - Duration h: 72h (OECD 201, Pseudokirchneriella subcapitata, ECHA dossier).

Reaction mass of [(2-hydroxyethyl)imino]bis(methylene)]bisphosphonic acid and phosphonic acid,-[(tetrahydro-2-hydroxy-2-oxido-4H-1,4,2-oxazaphosphorin-4-yl)methyl-]

a) Aquatic acute toxicity:

Endpoint: EC50 - Species: Daphnia 64 mg/l - Duration h: 48h (ISO TC147SC5/WG2, GLP, Acartia tonsa, freshwater, ECHA dossier).

Endpoint: LC50 - Species: Fish > 1000 mg/l - Duration h: 96h (Fish, ECHA dossier).

Diphenyl ether - CAS: 101-84-8

a) Aquatic acute toxicity:

Endpoint: EC10 - Species: Fish 4.2 mg/l - Duration h: 96h (study report, Oncorhynchus mykiss, ECHA dossier).

Endpoint: EC50 - Species: Daphnia 1.7 mg/l - Duration h: 48h (OECD 202, Daphnia magna, ECHA dossier).

12.2. Persistence and degradability

ethanol; ethyl alcohol - CAS: 64-17-5

Biodegradability: Readily biodegradable

propan-2-ol; isopropyl alcohol; isopropanol - CAS: 67-63-0

Biodegradability: Readily biodegradable

(R)-p-mentha-1,8-diene; d-limonene - CAS: 5989-27-5

Biodegradability: Readily biodegradable

Reaction mass of [(2-hydroxyethyl)imino]bis(methylene)]bisphosphonic acid and phosphonic acid,-[(tetrahydro-2-hydroxy-2-oxido-4H-1,4,2-oxazaphosphorin-4-yl)methyl-]

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Biodegradability: Non-readily biodegradable

Diphenyl ether - CAS: 101-84-8

Biodegradability: Readily biodegradable

12.3. Bioaccumulative potential

propan-2-ol; isopropyl alcohol; isopropanol - CAS: 67-63-0

Test: Kow - Partition coefficient 0.05

12.4. Mobility in soil

Not available

12.5. Results of PBT and vPvB assessment

vPvB Substances: None - PBT Substances: None

12.6. Endocrine disrupting properties

No endocrine disruptor substances present in concentration \geq 0.1%

12.7. Other adverse effects

None

SECTION 13: Disposal considerations**13.1. Waste treatment methods**

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

SECTION 14: Transport information**14.1. UN number or ID number**

ADR-UN Number: 3175

IATA-UN Number: 3175

IMDG-UN Number: 3175

14.2. UN proper shipping name

ADR-Shipping Name: SOLIDS CONTAINING FLAMMABLE LIQUID, N.O.S. (ethanol; ethyl alcohol, propan-2-ol; isopropyl alcohol; isopropanol)

IATA-Shipping Name: SOLIDS CONTAINING FLAMMABLE LIQUID, N.O.S. (ethanol; ethyl alcohol, propan-2-ol; isopropyl alcohol; isopropanol)

IMDG-Shipping Name: SOLIDS CONTAINING FLAMMABLE LIQUID, N.O.S. (ethanol; ethyl alcohol, propan-2-ol; isopropyl alcohol; isopropanol)

14.3. Transport hazard class(es)

ADR-Class: 4.1

IATA-Class: 4.1

IATA-Label: 4.1

IMDG-Class: 4.1

14.4. Packing group

ADR-Packing Group: II

IATA-Packing group: II

IMDG-Packing group: II

14.5. Environmental hazards

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ADR-Environmental Pollutant: No
IMDG-Marine pollutant: No
IMDG-EmS: F-A , S-I

14.6. Special precautions for user

ADR-Subsidiary hazards: -
ADR-S.P.: 216 274 601
ADR-Transport category (Tunnel restriction code): 2 (E)
ADR - Hazard identification number: 40
IATA-Passenger Aircraft: 445
IATA-Subsidiary hazards: -
IATA-Cargo Aircraft: 448
IATA-S.P.: A46
IATA-ERG: 3L
IMDG-Subsidiary hazards: -
IMDG-Stowage and handling: Category B
IMDG-Segregation: -

14.7. Maritime transport in bulk according to IMO instruments

Not Applicable

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

Dir. 98/24/EC (Risks related to chemical agents at work)
Dir. 2000/39/EC (Occupational exposure limit values)
Regulation (EC) n. 1907/2006 (REACH)
Regulation (EC) n. 1272/2008 (CLP)
Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013
Regulation (EU) n. 2020/878
Regulation (EU) n. 286/2011 (ATP 2 CLP)
Regulation (EU) n. 618/2012 (ATP 3 CLP)
Regulation (EU) n. 487/2013 (ATP 4 CLP)
Regulation (EU) n. 944/2013 (ATP 5 CLP)
Regulation (EU) n. 605/2014 (ATP 6 CLP)
Regulation (EU) n. 2015/1221 (ATP 7 CLP)
Regulation (EU) n. 2016/918 (ATP 8 CLP)
Regulation (EU) n. 2016/1179 (ATP 9 CLP)
Regulation (EU) n. 2017/776 (ATP 10 CLP)
Regulation (EU) n. 2018/669 (ATP 11 CLP)
Regulation (EU) n. 2018/1480 (ATP 13 CLP)
Regulation (EU) n. 2019/521 (ATP 12 CLP)
Regulation (EU) n. 2020/217 (ATP 14 CLP)
Regulation (EU) n. 2020/1182 (ATP 15 CLP)
Regulation (EU) n. 2021/643 (ATP 16 CLP)
Regulation (EU) n. 2021/849 (ATP 17 CLP)

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product:

Restriction 3

Restriction 40

Restrictions related to the substances contained:

Restriction 75

Provisions related to directive EU 2012/18 (Seveso III):

Seveso III category according to Annex 1, part 1

None

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WGK Classification (Water hazard class - Verwaltungsvorschrift wassergefährdende Stoffe)
WGK1 - Slightly hazardous for water

Lagerklasse according to TRGS 510:
LGK 4.1B: Flammable solids

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:
None.

Composition according to Annex VII.a of Reg. (EC) 648/2004:
>30%: disinfectant;
< 5%: non-ionic surfactants, perfume (Limonene, Citral).

California Proposition 65
Substance(s) listed under California Proposition 65:
None.

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.
Substances for which a Chemical Safety Assessment has been carried out:
propan-2-ol; isopropyl alcohol; isopropanol

SECTION 16: Other information

Full text of phrases referred to in Section 3:
H335 May cause respiratory irritation.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H319 Causes serious eye irritation.

Hazard class and hazard category	Code	Description
Met. Corr. 1	2.16/1	Substance or mixture corrosive to metals, Category 1
Flam. Liq. 2	2.6/2	Flammable liquid, Category 2
Flam. Liq. 3	2.6/3	Flammable liquid, Category 3
Acute Tox. 3	3.1/3/Oral	Acute toxicity (oral), Category 3
Asp. Tox. 1	3.10/1	Aspiration hazard, Category 1
Skin Corr. 1A	3.2/1A	Skin corrosion, Category 1A
Skin Corr. 1B	3.2/1B	Skin corrosion, Category 1B
Skin Irrit. 2	3.2/2	Skin irritation, Category 2
Eye Irrit. 2	3.3/2	Eye irritation, Category 2
Skin Sens. 1B	3.4.2/1B	Skin Sensitisation, Category 1B
STOT SE 3	3.8/3	Specific target organ toxicity - single exposure, Category 3
Aquatic Acute 1	4.1/A1	Acute aquatic hazard, category 1
Aquatic Chronic 3	4.1/C3	Chronic (long term) aquatic hazard, category 3

This safety data sheet has been completely updated in compliance to Regulation 2020/878. Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr.	Classification procedure
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1272/2008	
Flam. Liq. 3, H226	On basis of test data
Eye Irrit. 2, H319	Calculation method

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

- ECHA – European Chemical Agency
- GESTIS - Information system on hazardous substances of the German Social Accident Insurance
- IARC – International Agency for Research on Cancer
- IPCS INCHEM – International Programme on Chemical Safety
- ISS – Istituto Superiore di Sanità
- PubChem - open chemistry database at the National Institutes of Health (NIH)

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road.
ATE:	Acute Toxicity Estimate
ATEmix:	Acute toxicity Estimate (Mixtures)
CAS:	Chemical Abstracts Service (division of the American Chemical Society).
CLP:	Classification, Labeling, Packaging.
DNEL:	Derived No Effect Level.
EINECS:	European Inventory of Existing Commercial Chemical Substances.
GefStoffVO:	Ordinance on Hazardous Substances, Germany.
GHS:	Globally Harmonized System of Classification and Labeling of Chemicals.
IATA:	International Air Transport Association.
IATA-DGR:	Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO:	International Civil Aviation Organization.
ICAO-TI:	Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG:	International Maritime Code for Dangerous Goods.
INCI:	International Nomenclature of Cosmetic Ingredients.
KSt:	Explosion coefficient.
LC50:	Lethal concentration, for 50 percent of test population.
LD50:	Lethal dose, for 50 percent of test population.
PNEC:	Predicted No Effect Concentration.
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.
TLV:	Threshold Limiting Value.
TWA:	Time-weighted average
WGK:	German Water Hazard Class.