

Version: 4.2

Product number: 581155

Revision Date: 15.09.2022

Print Date: 16.09.2022

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

Product number	581155
Product name	AZ2026MIF

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

Use of the Sub- stance/Mixture	: Materials for use in technical applications Intermediate for electronic industry
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1.3 Details of the supplier of the safety data sheet

Company	Merck KGaA * 64271 Darmstadt * Germany * Phone:+49 6151 72-0
Responsible Department	* e-mail: ELECTRONICS_SDS@merckgroup.com

1.4 Emergency telephone number

+49 6151 722440

CHEMTREC International Emergency Telephone Number +1 703-741-5970 [CCN 842835]

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture****Classification (REGULATION (EC) No 1272/2008)**

Corrosive to metals, Category 1	H290: May be corrosive to metals.
Acute toxicity, Category 4	H302: Harmful if swallowed.
Acute toxicity, Category 3	H311: Toxic in contact with skin.
Skin corrosion, Sub-category 1C	H314: Causes severe skin burns and eye damage.
Serious eye damage, Category 1	H318: Causes serious eye damage.
Specific target organ toxicity - single exposure, Category 2, Central nervous system	H371: May cause damage to organs.
Specific target organ toxicity - repeated exposure, Category 2, Liver, thymus gland	H373: May cause damage to organs through prolonged or repeated exposure.

2.2 Label elements**Labelling (REGULATION (EC) No 1272/2008)**

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Hazard pictograms

:



Signal word

:

Danger

Hazard statements

:

H290 May be corrosive to metals.
H302 Harmful if swallowed.
H311 Toxic in contact with skin.
H314 Causes severe skin burns and eye damage.
H371 May cause damage to organs (Central nervous system).
H373 May cause damage to organs (Liver, thymus gland) through prolonged or repeated exposure.

Precautionary statements

:

Prevention:

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of water.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308 + P310 IF exposed or concerned: immediately call a POISON CENTER or doctor/ physician.

Hazardous components which must be listed on the label:

Tetramethylammonium hydroxide

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature

: Aqueous solution of organic compounds.

Components

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Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Tetramethylammonium hydroxide	75-59-2 200-882-9 01-2119970562-34- xxxx	Met. Corr. 1; H290 Acute Tox. 2; H300 Acute Tox. 1; H310 Skin Corr. 1B; H314 Eye Dam. 1; H318 STOT SE 1; H370 (Central nervous system) STOT RE 1; H372 (Liver, thymus gland) Aquatic Chronic 2; H411	>= 1 - < 2,5

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

- General advice : First aider needs to protect himself.
- If inhaled : fresh air. Immediately call in physician.
If breathing stops: immediately apply artificial respiration, if necessary also oxygen.
- In case of skin contact : Take off immediately all contaminated clothing. Rinse skin with water/ shower.
Call a physician immediately.
If a systemic effect is suspected, monitoring and treatment in an intensive care unit is urgently required.
- In case of eye contact : rinse out with plenty of water.
Immediately call in ophthalmologist.
Remove contact lenses.
- If swallowed : make victim drink water (two glasses at most), avoid vomiting (risk of perforation).
Call a physician immediately.
Do not attempt to neutralise.

4.2 Most important symptoms and effects, both acute and delayed

- Symptoms : Headache
Nausea
Vomiting
Salivation
Tremors
Abdominal pain
muscle twitching

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Convulsions
Diarrhoea
respiratory arrest
Unconsciousness
death

Irritation and corrosion
Cough
Shortness of breath

Risk of blindness!

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : No information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media : For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : Not combustible.

Ambient fire may liberate hazardous vapours.

5.3 Advice for firefighters

Special protective equipment for firefighters : Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information : Suppress (knock down) gases/vapours/mists with a water spray jet.
Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Advice for non-emergency personnel:
Do not breathe vapours, aerosols.
Avoid substance contact.
Ensure adequate ventilation.
Evacuate the danger area, observe emergency procedures,

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consult an expert.
Advice for emergency responders:
Protective equipment see section 8.
Indications about waste treatment see section 13.

6.2 Environmental precautions

Environmental precautions : Do not flush into surface water or sanitary sewer system.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Cover drains. Collect, bind, and pump off spills.
Observe possible material restrictions (see sections 7 and 10).
Take up carefully with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

6.4 Reference to other sections

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Provide sufficient air exchange and/or exhaust in work rooms.
Do not inhale substance/mixture.
Avoid generation of vapours/aerosols.

Observe label precautions.

Hygiene measures : Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Store in original container.

Further information on storage conditions : Tightly closed. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorised persons.

Risks from decomposition products: see section 10.3

Recommended storage temperature : If there is a suitable storage temperature range to be complied with, product label contains the relevant information accordingly.

7.3 Specific end use(s)

Specific use(s) : Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
Tetramethylammonium hydroxide	Workers	inhalation	Long-term systemic effects	0,49 mg/m3
	Workers	dermal	Long-term systemic effects	0,14 mg/kg
	Workers	dermal	Long-term local effects	0,00625 mg/cm2

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
Tetramethylammonium hydroxide	Water	0,0005 mg/l
	Marine water	0,00005 mg/l
	Fresh water sediment	0,03 mg/kg
	Marine sediment	0,003 mg/kg
	Soil	0,0057 mg/kg
	Sewage treatment plant	5 mg/l
	Intermittent use/release	0,03 mg/l

8.2 Exposure controls

Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

Personal protective equipment

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled and must meet the specifications of a standard EN/ISO/DIN. The chemical resistance of the protective equipment should be enquired at the respective supplier.

Eye protection : Tightly fitting safety goggles

Hand protection :
full contact

Glove material : natural latex

Glove thickness : 0,6 mm

Break through time : 480 min

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splash contact

Glove material : Nitrile rubber

Glove thickness : 0,11 mm

Break through time : 10 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example: KCL 706 Lapren®(full contact) ; KCL 741 Dermatril® L(splash contact)

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Respiratory protection : required when vapours/aerosols are generated.

Filter type : Filter A-(P2)

Protective measures : Full protective suit
Ensure that eye flushing systems and safety showers are located close to the working place.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state : viscous liquid

Colour : clear

Odour : No data available

Melting point : ca. 0 °C

Boiling point : ca. 100 °C (1.013 hPa)

Flammability : No data available

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Flash point : does not flash

Auto-ignition temperature : No data available

Decomposition temperature : No data available

pH : ca. 13 (20 °C)
Concentration: 100 %

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Viscosity	
Viscosity, dynamic	: ca. 1 mPas (20 °C)
Viscosity, kinematic	: No data available
Solubility(ies)	
Water solubility	: completely soluble
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
Vapour pressure	: ca. 23 mbar (20 °C)
Density	: ca. 1 g/cm ³ (20 °C)
Relative vapour density	: No data available

9.2 Other information

Explosives	: Not classified as explosive.
Oxidizing properties	: none
Flammability (liquids)	: not combustible
Metal corrosion rate	: Corrosive to metals

SECTION 10: Stability and reactivity

10.1 Reactivity

See section 10.3

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions

Hazardous reactions	: Violent reactions possible with: The generally known reaction partners of water. Risk of explosion with: Potassium peroxide Risk of ignition or formation of inflammable gases or vapours with: Metals Reacts with the following substances: Strong oxidizing agents Strong bases
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10.4 Conditions to avoid

Conditions to avoid	: no information available
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10.5 Incompatible materials

Materials to avoid : Metals

Aluminium
Zinc
Tin
bronze

Gives off hydrogen by reaction with metals.

10.6 Hazardous decomposition products

no information available

SECTION 11: Toxicological information

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

Acute toxicity

Product:

Acute oral toxicity : Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach.

Acute Toxicity Estimate (ATE): 302,19 mg/kg
Method: Calculation method

Acute inhalation toxicity : Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract

Acute dermal toxicity : Symptoms: Causes severe burns., Causes severe systemic effects after dermal exposure which could lead to death.

Acute Toxicity Estimate (ATE): 523,79 mg/kg
Method: Calculation method

Acute toxicity (other routes of administration) : No data available

Components:

Tetramethylammonium hydroxide:

Acute oral toxicity : LD50 (Rat, female): 7,5 mg/kg
Method: OECD Test Guideline 423
GLP: yes
Remarks: (ECHA)

Acute inhalation toxicity : Assessment: Toxic effects cannot be excluded

Acute dermal toxicity : LD50 (Rat, male and female): 13 mg/kg

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Remarks: (ECHA)
Based on human experience.

Symptoms: Causes severe systemic effects after dermal exposure which could lead to death.

Skin corrosion/irritation

Product:

Result : Corrosive, category 1C - where responses occur after exposures between 1 hour and 4 hours and observations up to 14 days.

Components:

Tetramethylammonium hydroxide:

Result : Causes burns.
Remarks : (ECHA)

Serious eye damage/eye irritation

Product:

Result : Irreversible effects on the eye

Remarks : Risk of blindness!

Components:

Tetramethylammonium hydroxide:

Result : Irreversible effects on the eye
Remarks : (ECHA)

Respiratory or skin sensitisation

Product:

No data available

Germ cell mutagenicity

Product:

Genotoxicity in vitro : No data available

Genotoxicity in vivo : No data available

Components:

Tetramethylammonium hydroxide:

Genotoxicity in vitro : Test Type: Ames test
Method: Mutagenicity (Escherichia coli - reverse mutation assay)

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Result: negative
Remarks: (ECHA)

Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster lung cells
Method: OECD Test Guideline 473
Result: negative
Remarks: (ECHA)

Carcinogenicity

Product:

No data available

Reproductive toxicity

Product:

Effects on fertility : No data available

Effects on foetal development : No data available

STOT - single exposure

Product:

No data available

Components:

Tetramethylammonium hydroxide:

Target Organs : Central nervous system
Assessment : The substance or mixture is classified as specific target organ toxicant, single exposure, category 1.
Remarks : (ECHA)

STOT - repeated exposure

Product:

No data available

Components:

Tetramethylammonium hydroxide:

Target Organs : Liver, thymus gland
Assessment : The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 1.
Remarks : (ECHA)

Repeated dose toxicity

Product:

No data available

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Components:

Tetramethylammonium hydroxide:

Species : Rat, female
NOAEL : 2,5 mg/kg
Application Route : Dermal
Exposure time : 28 d
Number of exposures : daily
Remarks : Local effects
(ECHA)

Species : Rat, male and female
NOAEL : 10 mg/kg
Application Route : Dermal
Exposure time : 28 d
Number of exposures : daily
Remarks : Systemic effects
(ECHA)

Species : Rat, male
NOAEL : 5 mg/kg
Application Route : Oral
Exposure time : 28 d
Method : OECD Test Guideline 407
Remarks : (ECHA)

Aspiration toxicity

Product:

No data available

11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Further information

Product:

Remarks : Possible symptoms:
Headache
Nausea
Vomiting
Salivation
Tremors
Abdominal pain
muscle twitching

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	Convulsions Diarrhoea respiratory arrest Unconsciousness death
Remarks	: Other dangerous properties can not be excluded. Handle in accordance with good industrial hygiene and safety practice.

SECTION 12: Ecological information

12.1 Toxicity

Product:

No data available

Components:

Tetramethylammonium hydroxide:

Toxicity to fish	: LC50 (Pimephales promelas (fathead minnow)): > 100 mg/l Exposure time: 96 h Method: OECD Test Guideline 203 Remarks: (ECHA) (in analogy to similar compounds)
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): 3 mg/l Exposure time: 48 h Method: OECD Test Guideline 202 Remarks: (ECHA)
Toxicity to algae/aquatic plants	: EC50 (Pseudokirchneriella subcapitata (green algae)): 96,3 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: (ECHA)
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	: NOEC: 0,025 mg/l Exposure time: 48 h Species: Daphnia magna (Water flea) Method: OECD Test Guideline 202 Remarks: (ECHA)

12.2 Persistence and degradability

Product:

No data available

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Components:

Tetramethylammonium hydroxide:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 100 %
Exposure time: 28 d
Method: OECD Test Guideline 301B
Remarks: (ECHA)

12.3 Bioaccumulative potential

Product:

No data available

Components:

Tetramethylammonium hydroxide:

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

Partition coefficient: n-octanol/water : log Pow: -1,4 (20 °C)
Method: OECD Test Guideline 107
GLP: yes
Remarks: Bioaccumulation is not expected.

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Components:

Tetramethylammonium hydroxide:

Assessment : Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to

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REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

Product:

Additional ecological information : Discharge into the environment must be avoided.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

SECTION 14: Transport information

Air transport (IATA)

14.1. UN/ID No. : UN 1835
14.2. Proper shipping name : Tetramethylammonium hydroxide, solution

14.3. Class : 8
14.4. Packing group : III
14.5 Environmentally hazardous : --
14.6 Special precautions for user : no

Sea transport (IMDG)

14.1. UN number : UN 1835
14.2. Proper shipping name : TETRAMETHYLAMMONIUM HYDROXIDE SOLUTION

14.3. Class : 8
14.4. Packing group : III
14.5 Environmentally hazardous : --
14.6 Special precautions for user : yes
EmS Code : F-A, S-B
Segregation group : 2: Ammonium compounds
18: Alkalies

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not relevant

Land transport (ADR/RID)

14.1. UN number : UN 1835
14.2. Proper shipping name : TETRAMETHYLAMMONIUM HYDROXIDE SOLUTION

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14.3. Class	: 8
14.4. Packing group	: III
14.5 Environmentally hazardous	: --
14.6 Special precautions for user	: yes
Tunnel restriction code	: (E)

Inland waterway transport (ADN)

ADN Classification : Not Assigned

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	: Conditions of restriction for the following entries should be considered: Number on list 3
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).	: Not applicable
Regulation (EC) No 1005/2009 on substances that deplete the ozone layer	: Not applicable
Regulation (EU) 2019/1021 on persistent organic pollutants (recast)	: Not applicable
REACH - List of substances subject to authorisation (Annex XIV)	: Not applicable

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Storage class (TRGS 510)	: 6.1D, Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects
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Other regulations:

Take note of Dir 94/33/EC on the protection of young people at work.
Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out.

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SECTION 16: Other information

Full text of H-Statements

H290	: May be corrosive to metals.
H300	: Fatal if swallowed.
H310	: Fatal in contact with skin.
H314	: Causes severe skin burns and eye damage.
H318	: Causes serious eye damage.
H370	: Causes damage to organs.
H372	: Causes damage to organs through prolonged or repeated exposure.
H411	: Toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox.	: Acute toxicity
Aquatic Chronic	: Long-term (chronic) aquatic hazard
Eye Dam.	: Serious eye damage
Met. Corr.	: Corrosive to metals
Skin Corr.	: Skin corrosion
STOT RE	: Specific target organ toxicity - repeated exposure
STOT SE	: Specific target organ toxicity - single exposure

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA

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- Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Decimal notation: "Thousands" places are identified with a dot (example: 2.000 mg/kg means "two thousand mg/kg"). Decimal places are identified with a comma (example: 1,35 g/cm³).

Revision Note

Safety datasheet sections : General revision
which have been updated SECTION 14 (Transport information)

Classification of the mixture:

Met. Corr. 1	H290
Acute Tox. 4	H302
Acute Tox. 3	H311
Skin Corr. 1C	H314
Eye Dam. 1	H318
STOT SE 2	H371
STOT RE 2	H373

Classification procedure:

Based on product data or assessment
Calculation method
Calculation method
Based on product data or assessment
Based on product data or assessment
Calculation method
Calculation method

Disclaimer

The information contained herein is based on the present state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product. This safety datasheet only contains information relating to safety and does not replace any product information or product specification.

REG_EU / EN