

according to Regulation (EC) No 1907/2006 (REACH) as amended

Hardener (for filling epoxy compound 041,049)

Creation date 03. February 2003

Revision date 16. February 2018 Version

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product identifier Hardener (for filling epoxy compound 041,049) 1.1.

Substance / mixture mixture

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

mixture's intended use Hardener.

Disapproved uses of mixture The product should not be used in ways other then those

referred in Section 1.

Details of the supplier of the safety data sheet 1.3.

Supplier

Name or trade name AG TermoPasty Grzegorz Gąsowski Address

Kolejowa 33 E, Sokoły, 18-218

Poland

Identification number (ID) 200133730 9661767714 VAT Reg No Phone 862741342 E-mail

biuro@termopasty.pl www.termopasty.pl

Importer

Web address

Name or trade name AG TermoPasty Grzegorz Gąsowski Kolejowa 33 E, Sokoły, 18-218 Address

Poland

200133730 Identification number (ID) 9661767714 VAT Reg No Phone 862741342

E-mail biuro@termopasty.pl Web address www.termopasty.pl

Competent person responsible for the safety data sheet

AG TermoPasty Grzegorz Gąsowski

E-mail biuro@termopasty.pl

1.4. **Emergency telephone number**

National Health Service (NHS) 111

National poisoning information centre Scotland, NHS 24: 111

SECTION 2: Hazards identification

Substance or mixture classification

Classification of the mixture in accordance with Regulation (EC) No 1272/2008

The mixture is classified as dangerous.

Acute Tox. 4, H302+H312 Skin Corr. 1B, H314 Skin Sens. 1, H317 Aquatic Chronic 3, H412

Full text of all classifications and hazard statements is given in the section 16.

Most serious adverse effects on human health and the environment

Causes severe skin burns and eye damage. May cause an allergic skin reaction. Harmful if swallowed or in contact with skin. Harmful to aquatic life with long lasting effects.



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Label elements Hazard pictogram





Signal word

Danger

Hazardous substances

Trietylenotetraamina Polietylenopoli-aminy, frakcja tetraetylenopenta- aminowa 2-piperazin-1-ylethylamine 2,2'-iminodiethylamine (AEEA)

Hazard statements

Causes severe skin burns and eye damage. H314 H317 May cause an allergic skin reaction.

Harmful to aquatic life with long lasting effects. H412

Harmful if swallowed or in contact with skin. H302+H312

Precautionary statements

Avoid breathing mist/vapours/spray. P262 Do not get in eyes, on skin, or on clothing.

P273 Avoid release to the environment.

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

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with

water or shower.

P405 Store locked up.

P501 Dispose of container to in accordance with national regulations.

2.3. Other hazards

Mixture does not contain any substance meet the criteria for PBT or vPvB in accordance with Annex XIII of Regulation (EC) No. 1907/2006 (REACH) as amended.

SECTION 3: Composition/information on ingredients

Mixtures

Chemical characterization

Mixture of substances and additives specified below.

Mixture contains these hazardous substances and substances with the highest permissible concentration in the working environment

| Identification numbers | Substance name | Content in % weight | Classification according to Regulation (EC) No 1272/2008 | Note. |
|---|---|---------------------------|--|-------|
| CAS: 90640-67-8 EC: 292-588-2 Registration number: 01-2119487919-13- XXXX | Trietylenotetraamina | >96 | Acute Tox. 4, H302+H312 Skin Corr. 1B, H314 Skin Sens. 1, H317 Aquatic Chronic 3, H412 | |
| CAS: 90640-66-7 EC: 292-587-7 | Polietylenopoli-aminy, frakcjatetraetylenopenta- aminowa | ≤1,5 | Acute Tox. 4, H302+H312 Skin Corr. 1B, H314 Skin Sens. 1, H317 Aquatic Chronic 2, H411 | |
| Index: 612-105-00-4 CAS: 140-31-8 EC: 205-411-0 | 2-piperazin-1-ylethylamine | ≤1,5 | Acute Tox. 4, H302, H312 Skin Corr. 1B, H314 Skin Sens. 1, H317 Aquatic Chronic 3, H412 | |



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| | | | _ | |
|---|------------------------|---------------------|--|-------|
| Identification numbers | Substance name | Content in % weight | Classification according to Regulation (EC) No 1272/2008 | Note. |
| Index: 612-058-00-X CAS: 111-40-0 EC: 203-865-4 | 2,2'-iminodiethylamine | ≤1,0 | Acute Tox. 4, H302, H312 Skin Corr. 1B, H314 Skin Sens. 1, H317 | |
| Index: 603-194-00-0 CAS: 111-41-1 EC: 203-867-5 | (AEEA) | <0,3 | Skin Corr. 1B, H314 Skin Sens. 1, H317 Repr. 1B, H360Df Specific concentration limit: STOT SE 3, H335: C ≥ 5 % | 1 |

Notes

The use of the substance is restricted by Annex XVII of REACH Regulation.

Full text of all classifications and hazard statements is given in the section 16.

SECTION 4: First aid measures

4.1. **Description of first aid measures**

Take care of your own safety. If any health problems are manifested or if in doubt, inform a doctor and show him information from this safety data sheet. If unconscious, put the person in the stabilized (recovery) position on his side with his head slightly bent backwards and make sure that airways are free; never induce vomiting. If the person vomits by himself, make sure that the vomit is not inhaled. In life threatening conditions first of all provide resuscitation of the affected person and ensure medical assistance. Respiratory arrest - provide artificial respiration immediately. Cardiac arrest - provide indirect cardiac massage immediately.

Terminate the exposure immediately; move the affected person to fresh air. Take care of your own safety, do not let the affected person walk! Beware of the contaminated clothes. Depending on the situation, call the medical rescue service and ensure medical treatment considering the frequent need of further observation for at least 24 hours.

Skin contact

Remove contaminated clothes. Take off any rings, watches, bracelets before or during washing if worn in the contaminated areas of the skin. Depending on the situation, call the medical rescue service and always ensure medical treatment. Rinse contaminated areas with a flow of water, lukewarm at best, for 10-30 minutes; do not use any brush, soap or neutralizers. Rinse skin with water/shower. Rinse cautiously with water for several minutes.

Eye contact

Rinse eyes immediately with a flow of running water, open the eyelids (also using force if needed); remove contact lenses immediately if worn by the affected person. No neutralization should be performed in any case! Rinsing should be continued for 10-30 minutes from the inner to the outer eye corner to make sure that the other eye is not involved. Depending on the situation, call medical rescue service or ensure medical treatment as promptly as possible. Everyone must be referred for treatment even if affected only a little.

Ingestion

DO NOT INDUCE VOMITING - there is danger of further damage to the gastrointestinal tract!!! Danger of esophageal and gastric perforation! RINSE THE MOUTH WITH WATER IMMEDIATELY AND LET THE PERSON DRINK 2-5 dl of cold water to reduce the heating effect of the corrosive substance. Consuming larger amounts of liquid is not advisable as it may induce vomiting and potential inhaling of the corrosive substances in the lungs. The affected person must not be forced to drink, particularly if already feeling pain in the mouth or throat. In this case let the affected person only rinse the mouth with water. DO NOT PROVIDE ACTIVATED CARBON! Depending on the situation, call medical rescue service or ensure medical treatment as promptly as possible.

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

Inhaling vapours can cause corrosion of the breathing system.

Skin contact

Causes severe skin burns. May cause an allergic skin reaction.

Eye contact

Causes serious eye damage.

Ingestion

Corrosion of the digestion system can occur.

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

Symptomatic treatment.



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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Alcohol-resistant foam, carbon dioxide, powder, water spray jet, water mist.

Unsuitable extinguishing media

Water - full jet.

5.2. Special hazards arising from the substance or mixture

In the event of fire, carbon monoxide, carbon dioxide and other toxic gases may arise. Inhalation of hazardous degradation (pyrolysis) products may cause serious health damage.

5.3. Advice for firefighters

Use a self-contained breathing apparatus and full-body protective clothing. Self-Contained Breathing Apparatus (SCBA) with a chemical protection suit only where personal (close) contact is likely. Do not allow run-off of contaminated fire extinguishing material to enter drains or surface and ground water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment for work. Follow the instructions in the Sections 7 and 8. Do not inhale aerosols. Prevent contact with skin and eyes.

6.2. Environmental precautions

Prevent contamination of the soil and entering surface or ground water.

6.3. Methods and material for containment and cleaning up

Spilled product should be covered with suitable (non-flammable) absorbing material (sand, diatomaceous earth, earth and other suitable absorption materials); to be contained in well closed containers and removed as per the Section 13. In the event of leakage of the substantial amount of the product, inform fire brigade and other competent bodies. After removal of the product, wash the contaminated site with plenty of water. Do not use solvents.

6.4. Reference to other sections

See the Section 7, 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Prevent formation of gases and vapours in concentrations exceeding the occupational exposure limits. Do not inhale aerosols. Prevent contact with skin and eyes. Contaminated work clothing should not be allowed out of the workplace. Wash hands and exposed parts of the body thoroughly after handling. Do no eat, drink or smoke when using this product. Use personal protective equipment as per Section 8. Observe valid legal regulations on safety and health protection. Avoid release to the environment.

7.2. Conditions for safe storage, including any incompatibilities

Store in tightly closed containers in cold, dry and well ventilated areas designated for this purpose. Store locked up.

7.3. Specific end use(s)

. Hardener.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

The mixture contains substances for which occupational exposure limits are set.

United Kingdom of Great Britain and Northern Ireland

| Substance name (component) | Туре | Time of exposure | Value | Note | Source |
|--|------|------------------|-----------------------|---|--------|
| 2,2'-iminodiethylamine (CAS: 111-40-0) | WEL | 8 hours | 4,3 mg/m ³ | Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity. | GBR |



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United Kingdom of Great Britain and Northern Ireland

| Substance name (component) | Туре | Time of exposure | Value | Note | Source |
|--|------|------------------|-------|---|--------|
| 2,2'-iminodiethylamine (CAS: 111-40-0) | WEL | 8 hours | 1 ppm | Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity. | GBR |

DNEL

Trietylenotetraamina

| Workers / consumers | Route of exposure | Value | Effect | Determining method |
|---------------------|-------------------|--------------------------|--------------------------|--------------------|
| Workers | Inhalation | 5380 mg/m ³ | Systemic acute effects | |
| Workers | Dermal | 0.57 mg/kg bw/day | Systemic chronic effects | |
| Workers | Inhalation | 1 mg/m³ | Systemic chronic effects | |
| Workers | Dermal | 0.028 mg/cm ² | Local chronic effects | |
| Consumers | Dermal | 8 mg/kg bw/day | Systemic acute effects | |
| Consumers | Inhalation | 1600 mg/m ³ | Systemic acute effects | |
| Consumers | Oral | 20 mg/kg bw/day | Systemic acute effects | |
| Consumers | Dermal | 8 mg/cm ² | Local acute effects | |
| Consumers | Dermal | 0.25 mg/kg bw/day | Systemic chronic effects | |
| Consumers | Inhalation | 0.29 mg/m ³ | Systemic chronic effects | |
| Consumers | Oral | 0.41 mg/kg bw/day | Systemic chronic effects | |
| Consumers | Dermal | 0.43 mg/cm ² | Local chronic effects | |

PNEC

Trietylenotetraamina

| Route of exposure | Value | Determining method |
|---|-----------------------------|--------------------|
| Drinking water | 0.19 mg/l | |
| Seawater | 0.038 mg/l | |
| Freshwater sediment | 95.9 mg/kg of dry substance | |
| Sea sediments | 19.2 mg/kg of dry substance | |
| Soil (agricultural) | 19.1 mg/kg of dry substance | |
| Microorganisms in wastewater treatment plants | 4.25 mg/l | |

8.2. Exposure controls

Follow the usual measures intended for health protection at work and especially for good ventilation. This can be achieved only by local suction or efficient general ventilation. Do not eat, drink and smoke during work. Wash your hands thoroughly with water and soap after work and before breaks for a meal and rest.

Eye/face protection

Protective goggles or face shield (based on the nature of the work performed).

Skin protection

Hand protection: Protective gloves resistant to the product. When choosing appropriate thickness, material and permeability of the gloves, observe recommendations of their particular manufacturer. Observe other recommendations of the manufacturer. Other protection: protective workwear. Contaminated skin should be washed thoroughly.



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Respiratory protection

Halfmask with a filter against organic vapours or a self-contained breathing apparatus as appropriate if exposure limit values of substances are exceeded or in a poorly ventilated environment.

Thermal hazard

Not available.

Environmental exposure controls

Observe usual measures for protection of the environment, see Section 6.2.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance liquid
Physical state liquid at 20°C
color yellow

Odour characteristic Odour threshold data not available

pH 13.2 (50 wody% solution)

Melting point/freezing point data not available

Initial boiling point and boiling range 275 $^{\circ}$ C Flash point 118 $^{\circ}$ C

Evaporation rate data not available Flammability (solid, gas) data not available

Upper/lower flammability or explosive limits

flammability limits data not available explosive limits data not available Vapour pressure 0.346 Pa at 20 °C Vapour density data not available Relative density data not available

Solubility(ies)

solubility in water soluble solubility in fats not available Partition coefficient: n-octanol/water log Pow -2.65 Auto-ignition temperature 325 °C

Decomposition temperature data not available Viscosity data not available

Explosive properties The product does not have explosive properties.

Oxidising properties data not available

9.2. Other information

Density 0.98 g/cm³ at 20 °C ignition temperature data not available

SECTION 10: Stability and reactivity

10.1. Reactivity

not available

10.2. Chemical stability

The product is stable under normal conditions.

10.3. Possibility of hazardous reactions

Unknown.

10.4. Conditions to avoid

The product is stable and no degradation occurs under normal use. Protect against flames, sparks, overheating and against frost.

10.5. Incompatible materials

Protect against strong acids, bases and oxidizing agents.

10.6. Hazardous decomposition products

Not developed under normal uses. Dangerous outcomes such as carbon monoxide and carbon dioxide are formed at high temperature and in fire.



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SECTION 11: Toxicological information

11.1. Information on toxicological effects

No toxicological data is available for the mixture.

Acute toxicity

Harmful if swallowed or in contact with skin.

Trietylenotetraamina

| Route of exposure | Parameter | Value | Time of exposure | Species | Sex |
|--------------------|-----------|------------|------------------|----------------------------|-----|
| Inhalation (gases) | LC50 | | | | |
| Skin | LC50 | 1465 mg/kg | | Rabbit | |
| Oral | LC50 | 1716 mg/kg | | Rat (Rattus norvegicus) | |

Skin corrosion/irritation

Causes severe skin burns and eye damage.

Serious eye damage/irritation

Causes severe skin burns and eye damage.

Respiratory or skin sensitisation

May cause an allergic skin reaction.

Germ cell mutagenicity

Based on available data the classification criteria are not met.

Carcinogenicity

Based on available data the classification criteria are not met.

Reproductive toxicity

Based on available data the classification criteria are not met.

Toxicity for specific target organ - single exposure

Based on available data the classification criteria are not met.

Toxicity for specific target organ - repeated exposure

Based on available data the classification criteria are not met.

Aspiration hazard

Inhalation of solvent vapors above values exceeding exposure limits for working environment may result in acute inhalation poisoning, depending on the level of concentration and exposure time. Based on available data the classification criteria are not met.

SECTION 12: Ecological information

12.1. Toxicity

Acute toxicity

Harmful to aquatic life with long lasting effects.

Trietylenotetraamina

| Parameter | Value | Time of exposure | Species | Environment |
|-----------|-----------|------------------|----------------------------|-------------|
| LC50 | 330 mg/l | 96 hour | Pimephales promelas | |
| EC50 | 31.1 mg/l | 48 hour | Daphnia (Daphnia magna) | |



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Trietylenotetraamina

| Parameter | Value | Time of exposure | Species | Environment |
|------------------|---------|------------------|--|-------------|
| EC ₅₀ | 20 mg/l | 72 hour | Algae and other aquatic plants (Pseudokirchneriella subcapitata) | |

Chronic toxicity

Trietylenotetraamina

| Parameter | Value | Time of exposure | Species | Environment |
|-----------|----------|------------------|----------------------------|-------------|
| NOEC | 1.9 mg/l | | Daphnia (Daphnia magna) | |

12.2. Persistence and degradability

Biodegradability

Trietylenotetraamina

| Parameter | Value | Time of exposure | Environment | Result |
|-----------|-------|------------------|-------------|----------------------|
| | | | | Hardly biodegradable |

Not available.

12.3. Bioaccumulative potential

Trietylenotetraamina

| The tylene test during | | | | | | | |
|------------------------|-------|------------------|---------|-------------|------------------------------|--|--|
| Parameter | Value | Time of exposure | Species | Environment | Surrounding temperature [°C] | | |
| Log Pow | -2.65 | | | | | | |

Not available.

12.4. Mobility in soil

Not available.

12.5. Results of PBT and vPvB assessment

Product does not contain any substance meeting the criteria for PBT or vPvB in accordance with the Annex XIII of Regulation (EC) No 1907/2006 (REACH) as amended.

12.6. Other adverse effects

Not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Hazard of environmental contamination; dispose of the waste in accordance with the local and/or national regulations. Proceed in accordance with valid regulations on waste disposal. Any unused product and contaminated packaging should be put in labelled containers for waste collection and submitted for disposal to a person authorised for waste removal (a specialized company) that is entitled for such activity. Do not empty unused product in drainage systems. The product must not be disposed of with municipal waste. Empty containers may be used at waste incinerators to produce energy or deposited in a dump with appropriate classification. Perfectly cleaned containers can be submitted for recycling.

Legislation of waste

Council Directive 75/442/EEC on waste, as amended. Decree No. 383/2001 Coll., on details regarding waste handling as amended. Decree No. 93/2016 Coll., (waste catalogue) as amended. Decision 2000/532/EC establishing a list of wastes, as amended.



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SECTION 14: Transport information

14.1. UN number

UN 2259

14.2. UN proper shipping name

TRIETHYLENETETRAMINE

14.3. Transport hazard class(es)

8 Corrosive substances

14.4. Packing group

II - substances presenting medium danger

14.5. Environmental hazards

not available

14.6. Special precautions for user

Reference in the Sections 4 to 8.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

not available

Additional information

Hazard identification No.

UN number

Classification code

Safety signs

80 2259

(Kemler Code)

C7



Air transport - ICAO/IATA

Packaging instructions passenger 851
Cargo packaging instructions 855

Marine transport - IMDG

EmS (emergency plan) F-A, S-B

SECTION 15: Regulatory information

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

Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18th December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing the European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EC) No. 793/93 and Commission Regulation (EC) No. 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, as amended. Regulation (EC) No. 1272/2008 of the European Parliament and of the Council of 16th December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No. 1907/2006, as amended. The Act No. 350/2011 Coll., on Chemical Substances and Chemical Preparations as amended (the Chemical Act). Decree No. 432/2003 Coll., laying down conditions for assigning categories to individual jobs, limit values of indices from biological exposure tests, conditions for the sampling of biological materials for biological exposure and the particulars of the reports on work with asbestos and biological agents as amended.



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Restrictions pursuant to Annex XVII of Regulation (EC) No. 1907/2006 (REACH), as amended

(AEEA)

| Restriction | Conditions of restriction |
|-------------|--|
| 30 | Without prejudice to the other parts of this Annex the following shall apply to entries 28 to 30: 1. Shall not be placed on the market, or used, — as substances, — as constituents of other substances, or, — in mixtures, for supply to the general public when the individual concentration in the substance or mixture is equal to or greater than: — either the relevant specific concentration limit specified in Part 3 of Annex VI to Regulation (EC) No 1272/2008, or, — the relevant concentration specified in Directive 1999/45/EC where no specific concentration limit is set out in Part 3 of Annex VI to Regulation (EC) No 1272/2008. |
| | Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of substances and mixtures, suppliers shall ensure before the placing on the market that the packaging of such substances and mixtures is marked visibly, legibly and indelibly as follows: "Restricted to professional users". |
| | 2. By way of derogation, paragraph 1 shall not apply to: (a) medicinal or veterinary products as defined by Directive 2001/82/EC and Directive 2001/83/EC; (b) cosmetic products as defined by Directive 76/768/EEC; (c) the following fuels and oil products: — motor fuels which are covered by Directive 98/70/EC, — mineral oil products intended for use as fuel in mobile or fixed combustion plants, — fuels sold in closed systems (e.g. liquid gas bottles); (d) artists' paints covered by Directive 1999/45/EC. (e) the substances listed in Appendix 11, column 1, for the applications or uses listed in Appendix 11, column 2. Where a date is specified in column 2 of Appendix 11, the derogation shall apply until the said date. |

15.2. Chemical safety assessment

not available

SECTION 16: Other information

A list of standard risk phrases used in the safety data sheet

| | • | |
|--|---|--|
| H302 | Harmful if swallowed. | |
| H312 | Harmful in contact with skin. | |
| H314 | Causes severe skin burns and eye damage. | |
| H317 | May cause an allergic skin reaction. | |
| H360Df | May damage the unborn child. Suspected of damaging fertility. | |
| H411 | Toxic to aquatic life with long lasting effects. | |
| H412 | Harmful to aquatic life with long lasting effects. | |
| H302+H312 | Harmful if swallowed or in contact with skin. | |
| Guidelines for safe handling used in the safety data sheet | | |

Guidelines for safe handling used in the safety data sheet

P261 Avoid breathing mist/vapours/spray. P262 Do not get in eyes, on skin, or on clothing.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with

water or shower.

P273 Avoid release to the environment.

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

P405 Store locked up.

P501 Dispose of container to in accordance with national regulations.

Other important information about human health protection

The product must not be - unless specifically approved by the manufacturer/importer - used for purposes other than as per the Section 1. The user is responsible for adherence to all related health protection regulations.



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Key to abbreviations and acronyms used in the safety data sheet

ADR European agreement concerning the international carriage of dangerous goods by road

BCF Bioconcentration Factor CAS Chemical Abstracts Service

CLP Regulation (EC) No 1272/2008 on classification, labelling and packaging of substance and

mixtures

DNEL Derived no-effect level

FC Identification code for each substance listed in EINECS

EC₅₀ Concentration of a substance when it is affected 50% of the population **EINECS** European Inventory of Existing Commercial Chemical Substances

FmS Emergency plan EU European Union

IATA International Air Transport Association

IBC International Code For The Construction And Equipment of Ships Carrying Dangerous

Chemicals

IC50 Concentration causing 50% blockade **ICAO** International Civil Aviation Organization **IMDG** International Maritime Dangerous Goods

INCI International Nomenclature of Cosmetic Ingredients International Organization for Standardization ISO **IUPAC** International Union of Pure and Applied Chemistry

LC50 Lethal concentration of a substance in which it can be expected death of 50% of the

population

ID50 Lethal dose of a substance in which it can be expected death of 50% of the population

LOAFC Lowest observed adverse effect concentration

LOAEL Lowest observed adverse effect level log Kow Octanol-water partition coefficient

MARPOL International Convention for the Prevention of Pollution From Ships

NOAEC No observed adverse effect concentration

NOAEL No observed adverse effect level NOEC No observed effect concentration **NOEL** No observed effect level

OEL Occupational Exposure Limits **PBT** Persistent, Bioaccumulative and Toxic **PNEC** Predicted no-effect concentration

Parts per million nnm

REACH Registration, Evaluation, Authorisation and Restriction of Chemicals

RID Agreement on the transport of dangerous goods by rail

Four-figure identification number of the substance or article taken from the UN Model LIN

Regulations

UVCB Substances of unknown or variable composition, complex reaction products or biological

materials

VOC Volatile organic compounds

vPvR Very Persistent and very Bioaccumulative

Acute Tox. Acute toxicity

Aquatic Chronic Hazardous to the aquatic environment

Repr. Reproductive toxicity Skin Corr. Skin corrosion Skin Sens. Skin sensitization

Training guidelines

Inform the personnel about the recommended ways of use, mandatory protective equipment, first aid and prohibited ways of handling the product.

Recommended restrictions of use

not available

Information about data sources used to compile the Safety Data Sheet



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Statement

The safety data sheet provides information aimed at ensuring safety and health protection at work and environmental protection. The provided information corresponds to the current status of knowledge and experience and complies with valid legal regulations. The information should not be understood as guaranteeing the suitability and usability of the product for a particular application.

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