

Safety Data Sheet

ULTRACARE DEEP CLEANER

Safety Data Sheet dated: 26/01/2024 - version 1



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

1.1. Product identifier

Mixture identification:

Trade name: ULTRACARE DEEP CLEANER

Trade code: 9001524

UFI: K047-R05C-100K-ASY9

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

Recommended use: Cleaner

Uses advised against: Data not available.

1.3. Details of the supplier of the safety data sheet

Company: MAPEI U.K. Ltd - Mapei House Steel Park Road

Halesowen - West Midlands B62 8HD

phone: +44(0)121 508 6970 - fax: +44(0)121 5086 960 - www.mapei.co.uk (office hour 8:30-17:30)

Responsible: sicurezza@mapei.it

1.4. Emergency telephone number

call NHS 111 or a doctor/OHES Environmental Ltd +44(0)333 333 9962

SECTION 2: Hazards identification



2.1. Classification of the substance or mixture

Regulation (EC) n. 1272/2008 (CLP)

Met. Corr. 1 May be corrosive to metals.

Skin Corr. 1A Causes severe skin burns and eye damage.

Eye Dam. 1 Causes serious eye damage.

Aquatic Acute 1 Very toxic to aquatic life.

Aquatic Chronic 2 Toxic to aquatic life with long lasting effects.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Regulation (EC) No 1272/2008 (CLP):

Hazard pictograms and Signal Word



Danger

Hazard statements

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

H400 Very toxic to aquatic life.

H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

P273 Avoid release to the environment.

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

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

1

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

3

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

8

P310 Immediately call a POISON CENTER.
P391 Collect spillage.

Contains

Amines, C12-14-alkyldimethyl, N-oxides
sodium hypochlorite, solution... % Cl active
sodium hydroxide; caustic soda

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 >= 0.1%
Other Hazards: No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

Not Relevant

3.2. Mixtures

Mixture identification: ULTRACARE DEEP CLEANER

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

| Qty | Name | Ident. Numb. | Classification | Registration Number |
|-------------|--|---|---|-----------------------|
| ≥5 - <10 % | Amines, C12-14-alkyldimethyl, N-oxides | CAS:308062-28-4, 68424-94-2 EC:931-292-6 | Eye Dam. 1, H318; Acute Tox. 4, H302; Skin Irrit. 2, H315; Aquatic Acute 1, H400; Aquatic Chronic 2, H411, M-Acute:1 | 01-2119490061-47-XXXX |
| ≥2.5 - <5 % | sodium hypochlorite, solution... % Cl active | CAS:7681-52-9 EC:231-668-3 Index:017-011-00-1 | Met. Corr. 1, H290; Aquatic Acute 1, H400; Skin Corr. 1B, H314; STOT SE 3, H335; Aquatic Chronic 1, H410, M-Chronic:1, M-Acute:10, EUH031 | 01-2119488154-34-XXXX |
| ≥2.5 - <5 % | sodium hydroxide; caustic soda | CAS:1310-73-2 EC:215-185-5 Index:011-002-00-6 | Skin Corr. 1A, H314 Met. Corr. 1, H290 Specific Concentration Limits: 5% ≤ C < 100%: Skin Corr. 1A H314 2% ≤ C < 5%: Skin Corr. 1B H314 0.5% ≤ C < 2%: Skin Irrit. 2 H315 0.5% ≤ C < 2%: Eye Irrit. 2 H319 | 01-2119457892-27-XXXX |

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:
Immediately take off all contaminated clothing.
OBTAIN IMMEDIATE MEDICAL ATTENTION.
Remove contaminated clothing immediately and dispose of 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 induce vomiting, get medical attention showing the SDS and the hazard label.

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

Eye irritation
Eye damages
Skin Irritation

Erythema

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:

(see paragraph 4.1)

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO₂).

Extinguishing media which must not be used for safety reasons:

None in particular.

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 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.

Limit leakages with earth or sand.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

6.3. Methods and material for containment and cleaning up

Suitable material for taking up: absorbing material, organic, sand

Wash with plenty of water.

Retain contaminated washing water and dispose it.

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.

Contaminated clothing should be changed before entering eating areas.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

Advice on general occupational hygiene:

7.2. Conditions for safe storage, including any incompatibilities

Keep away from food, drink and feed.

Incompatible materials:

None in particular.

May be corrosive to metals.

Instructions as regards storage premises:

Adequately ventilated premises.

7.3. Specific end use(s)

Recommendation(s)

None in particular

Industrial sector specific solutions:

None in particular

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Community Occupational Exposure Limits (OEL)

| | OEL Type | Country | Occupational Exposure Limit |
|--|-------------------------|-------------|--|
| sodium hydroxide; caustic soda CAS: 1310-73-2 | NDS | | Long Term: 0.5 mg/m3 |
| | NDSch | | Long Term: 1 mg/m3 |
| | National SWEDEN | | Long Term: 1 mg/m3; Short Term: Ceiling - 2 mg/m3 SWEDEN, Ceiling limit value |
| | National FINLAND | | Short Term: 2 mg/m3 FINLAND, takvärde |
| | National NORWAY | | Long Term: 2 mg/m3 NORWAY, T |
| | ACGIH | | Short Term: Ceiling - 2 mg/m3 URT, eye, and skin irr |
| | National NORWAY | | Long Term: 2 mg/m3; Short Term: 2 mg/m3 |
| | ACGIH | | Short Term: Ceiling - 2 mg/m3 |
| | ACGIH | | eye, skin and upper respiratory tract irritation |
| | National SWEDEN | | Long Term: 1 mg/m3 |
| | National FRANCE | | Long Term: 2 mg/m3 |
| | National SPAIN | | Short Term: 2 mg/m3 |
| | National GREECE | | Long Term: 2 mg/m3; Short Term: 2 mg/m3 |
| | National DENMARK | | Short Term: Ceiling - 2 mg/m3 |
| | National FINLAND | | Short Term: Ceiling - 2 mg/m3 |
| | National NORWAY | | Short Term: Ceiling - 2 mg/m3 |
| | NDS | POLAND | Long Term: 0.5 mg/m3 |
| | NDSch | POLAND | Short Term: 1 mg/m3 |
| | CHE | SWITZERLAND | Short Term: 2 mg/m3 |
| | National CZECH REPUBLIC | | Long Term: 1 mg/m3 |
| | National HUNGARY | | Long Term: 2 mg/m3; Short Term: 2 mg/m3 |
| | Malaysia OEL | MALAYSIA | Short Term: Ceiling - 2 mg/m3 |
| | National PORTUGAL | | Short Term: Ceiling - 2 mg/m3 |
| | National ESTONIA | | Long Term: 1 mg/m3; Short Term: 2 mg/m3 |
| | National LATVIA | | Long Term: 0.5 mg/m3 |
| | National CZECH REPUBLIC | | Short Term: Ceiling - 2 mg/m3 |
| | National SLOVAKIA | | Long Term: 2 mg/m3 |
| | National SLOVENIA | | Long Term: 2 mg/m3; Short Term: 2 mg/m3 |
| | National UNITED KINGDOM | | Short Term: 2 mg/m3 |
| | National BULGARIA | | Long Term: 2 mg/m3 |
| | National LITHUANIA | | Short Term: Ceiling - 2 mg/m3 |
| | National CROATIA | | Short Term: 2 mg/m3 |

Predicted No Effect Concentration (PNEC) values

Amines, C12-14-alkyldimethyl, N-oxides
CAS: 308062-28-4,
68424-94-2

Exposure Route: Fresh Water; PNEC Limit: 0.0335 mg/l

Exposure Route: Freshwater sediments; PNEC Limit: 5.24 mg/kg

Exposure Route: Marine water; PNEC Limit: 0.00335 mg/l
Exposure Route: Marine water sediments; PNEC Limit: 0.524 mg/kg
Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 24 mg/l
Exposure Route: Soil; PNEC Limit: 1.02 mg/kg

Derived No Effect Level (DNEL) values

Amines, C12-14-alkyldimethyl, N-oxides
CAS: 308062-28-4, 68424-94-2

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects
Worker Industry: 6.2 mg/m³; Consumer: 1.53 mg/m³

Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects
Worker Industry: 11 mg/kg; Consumer: 5.5 mg/kg

Exposure Route: Human Oral; Exposure Frequency: Long Term, systemic effects
Consumer: 0.44 mg/kg

8.2. Exposure controls

Eye protection:

Use close fitting safety goggles, don't use eye lens.

Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.

Protection for hands:

Suitable materials for safety gloves; EN ISO 374:

Polychloroprene - CR: thickness $\geq 0,5$ mm; breakthrough time ≥ 480 min.

Nitrile rubber - NBR: thickness $\geq 0,35$ mm; breakthrough time ≥ 480 min.

Butyl rubber - IIR: thickness $\geq 0,5$ mm; breakthrough time ≥ 480 min.

Fluorinated rubber - FKM: thickness $\geq 0,4$ mm; breakthrough time ≥ 480 min.

Neoprene gloves are suggested (0,5 mm) not recommended gloves: not waterproof gloves

Respiratory protection:

Personal Protective Equipment should comply with relevant CE standards (as EN ISO 374 for gloves and EN ISO 166 for goggles), correctly maintained and stored. Consult the supplier to check the suitability of equipment against specific chemicals and for user information.

Respiratory protection must be used where exposure levels exceed workplace exposure limits. Refer to appropriate EN standards, like EN 136, 140, 143, 149, 14387 for information on selection and use of appropriate respiratory protection equipment.

Hygienic and Technical measures

Not available

Appropriate engineering controls:

Not available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Liquid

Appearance: liquid

Color: Transparent

Odour: Characteristic

Melting point / freezing point: 0 °C (32 °F)

Initial boiling point and boiling range: 100 °C (212 °F)

Flammability: N.A.

Lower and upper explosion limit: Not available

Flash point: Not available

Auto-ignition temperature: Not available

Decomposition temperature: Not available

pH: 13.00

Viscosity: 15.00 mPA-s

Kinematic viscosity: ≤ 14 mm²/sec (40 °C) mm²/s

Solubility in water: easily soluble

Solubility in oil: insoluble

Partition coefficient (n-octanol/water): Not available

Vapour pressure: 2.34

Relative density: 1.13 g/cm³

Vapour density: 0.017

Particle characteristics:

Particle size: Not available

9.2. Other information

Miscibility: Not available
Conductivity: Not available
Metal corrosion rate: 6.26
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

None.

10.4. Conditions to avoid

Stable under normal conditions.

10.5. Incompatible materials

May be corrosive to metals.

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 Preparation

| | |
|--------------------------------------|--|
| a) acute toxicity | Not classified |
| | Based on available data, the classification criteria are not met |
| b) skin corrosion/irritation | The product is classified: Skin Corr. 1A(H314) |
| c) serious eye damage/irritation | The product is classified: Eye Dam. 1(H318) |
| d) respiratory or skin sensitisation | Not classified |
| | Based on available data, the classification criteria are not met |
| e) germ cell mutagenicity | Not classified |
| | Based on available data, the classification criteria are not met |
| f) carcinogenicity | Not classified |
| | Based on available data, the classification criteria are not met |
| g) reproductive toxicity | Not classified |
| | Based on available data, the classification criteria are not met |
| h) STOT-single exposure | Not classified |
| | Based on available data, the classification criteria are not met |
| i) STOT-repeated exposure | Not classified |
| | Based on available data, the classification criteria are not met |
| j) aspiration hazard | Not classified |
| | Based on available data, the classification criteria are not met |

Toxicological information on main components of the mixture:

| | | |
|--|-------------------|-------------------------------|
| Amines, C12-14-alkyldimethyl, N-oxides | a) acute toxicity | LD50 Oral Rat = 2000 mg/kg |
| | | LD50 Skin Rabbit > 2000 mg/kg |
| sodium hypochlorite, solution... % Cl active | a) acute toxicity | LD50 Oral Rat > 2000 mg/kg |
| | | LD50 Skin Rabbit > 2000 mg/kg |
| sodium hydroxide; caustic soda | a) acute toxicity | LD50 Oral Rat 2000 mg/kg |
| | | LD50 Skin Rabbit 1350 mg/kg |
| | | LD50 Oral Rabbit 500 mg/kg |
| | | LD50 Skin Rabbit = 1350 mg/kg |
| | | LD50 Oral Rat = 325 mg/kg |
| | | LD50 Skin Rabbit = 1350 mg/kg |

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.

Eco-Toxicological Information:

Very toxic to aquatic organisms.

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

List of Eco-Toxicological properties of the product

The product is classified: Aquatic Acute 1(H400), Aquatic Chronic 2(H411)

List of Eco-Toxicological properties of the components

| Component | Ident. Numb. | Ecotox Data |
|--|--|---|
| Amines, C12-14-alkyldimethyl, N-oxides | CAS: 308062-28-4, 68424-94-2 - EINECS: 931-292-6 | a) Aquatic acute toxicity : EC50 Daphnia = 3.1 mg/L 48h |
| sodium hypochlorite, solution... % Cl active | CAS: 7681-52-9 - EINECS: 231-668-3 - INDEX: 017-011-00-1 | a) Aquatic acute toxicity : EC50 Daphnia = 0.026 mg/L 48h a) Aquatic acute toxicity : LC50 Fish = 0.032 mg/L 96h EPA b) Aquatic chronic toxicity : NOEC Fish = 0.04 mg/L 48h |
| sodium hydroxide; caustic soda | CAS: 1310-73-2 - EINECS: 215-185-5 - INDEX: 011-002-00-6 | a) Aquatic acute toxicity : EC50 Daphnia = 76 mg/L 24 a) Aquatic acute toxicity : EC50 Daphnia = 40.38 mg/L 48 a) Aquatic acute toxicity : LC50 Fish = 99 mg/L 48 a) Aquatic acute toxicity : LC50 Fish = 45.5 mg/L 96 b) Aquatic chronic toxicity : NOEC Fish = 56 mg/L 96 a) Aquatic acute toxicity : LC50 Fish Oncorhynchus mykiss = 45.4 mg/L 96h IUCLID |

12.2. Persistence and degradability

N.A.

12.3. Bioaccumulative potential

N.A.

12.4. Mobility in soil

N.A.

12.5. Results of PBT and vPvB assessment

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

12.6. Endocrine disrupting properties

No endocrine disruptor substances present in concentration $\geq 0.1\%$

12.7. Other adverse effects

Not available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

The generation of waste should be avoided or minimized wherever possible. Recover if possible.

A waste code (EWC) according to European List of Waste (LoW) cannot be specified, due to dependence on the usage. Contact and send to an authorized waste disposal service.

Methods of disposal:

Disposal of this product, solutions, packaging and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Dispose of surplus and nonrecyclable products via a licensed waste disposal contractor.

Do not dispose of waste into sewers.

Hazardous waste: Yes

Disposal considerations:

Do not allow to enter drains or watercourses.

Dispose of product according to all federal, state and local applicable regulations.

If this product is mixed with other wastes, the original waste product code may no longer apply and the appropriate code should be assigned.

Dispose of containers contaminated by the product in accordance with local or national legal provisions. For further information, contact your local waste authority.

Special precautions:

This material and its container must be disposed of in a safe way. Care should be taken when handling untreated empty containers.

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Empty containers or liners may retain some product residues. Do not re-use empty containers.

SECTION 14: Transport information

14.1. UN number or ID number

1719

14.2. UN proper shipping name

ADR-Shipping Name: CAUSTIC ALKALI LIQUID, N.O.S. (sodium hydroxide, solution - sodium hypochlorite, solution)

IATA-Technical name: CAUSTIC ALKALI LIQUID, N.O.S. (sodium hydroxide, solution - sodium hypochlorite, solution)

IMDG-Technical name: CAUSTIC ALKALI LIQUID, N.O.S. (sodium hydroxide, solution - sodium hypochlorite, solution)

14.3. Transport hazard class(es)

ADR-Class: 8

IATA-Class: 8

IMDG-Class: 8

14.4. Packing group

ADR-Packing Group: III

IATA-Packing group: III

IMDG-Packing group: III

14.5. Environmental hazards

Marine pollutant: Yes

Environmental Pollutant: Yes

IMDG-EMS: F-A, S-B

14.6. Special precautions for user

Road and Rail (ADR-RID):

ADR-Label: 8

ADR-Hazard identification number: 80

ADR-Special Provisions: 274

ADR-Transport category (Tunnel restriction code): 3 (E)

ADR-Limited Quantity threshold: 5 L

Air (IATA):

IATA-Passenger Aircraft: 852

IATA-Cargo Aircraft: 856

IATA-Label: 8

IATA-Subsidiary hazards: -

IATA-Erg: 8L

IATA-Special Provisions: A3 A803

Sea (IMDG):

IMDG-Stowage Code: Category A

IMDG-Stowage Note: SG22 SG35 SGG18

IMDG-Subsidiary hazards: -

IMDG-Special Provisions: 223 274

IMDG-EMS: F-A, S-B

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 (EU) n. 2020/878
Regulation (EC) n. 1272/2008 (CLP)
Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013
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. 2019/521 (ATP 12 CLP)
Regulation (EU) n. 2018/1480 (ATP 13 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)
Regulation (EU) n. 2022/692 (ATP 18 CLP)

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

| Seveso III category according to Annex 1, part 1 | Lower-tier threshold (tonnes) | Upper-tier threshold (tonnes) |
|--|-------------------------------|-------------------------------|
| Product belongs to category: E1 | 100 | 200 |
| Product belongs to category: E2 | 200 | 500 |

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: 3
Restrictions related to the substances contained: 75

SVHC Substances:
SVHC substances not present in a concentration $\geq 0.1\%$ (w/w)

National regulations
Produktregisteret Norge: 660570
MAL-kode: 00-4 (1993)

German Water Hazard Class.
Class 3: extremely hazardous.

Regulation (EC) nr 648/2004 (Detergents).
Product contents:

| | |
|---------------------------------|------|
| Category: | Qty: |
| non-ionic surfactants | < 5% |
| phosphates | < 5% |
| chlorine-based bleaching agents | < 5% |

15.2. Chemical safety assessment
No Chemical Safety Assessment has been carried out for the mixture.

SECTION 16: Other information

| Code | Description |
|--------|--|
| EUH031 | Contact with acids liberates toxic gas. |
| H290 | May be corrosive to metals. |
| H302 | Harmful if swallowed. |
| H314 | Causes severe skin burns and eye damage. |
| H315 | Causes skin irritation. |
| H318 | Causes serious eye damage. |
| H319 | Causes serious eye irritation. |
| H335 | May cause respiratory irritation. |
| H400 | Very toxic to aquatic life. |

| | |
|------|---|
| H410 | Very toxic to aquatic life with long lasting effects. |
| H411 | Toxic to aquatic life with long lasting effects. |

| Code | Hazard class and hazard category | Description |
|------------|----------------------------------|--|
| 2.16/1 | Met. Corr. 1 | Substance or mixture corrosive to metals, Category 1 |
| 3.1/4/Oral | Acute Tox. 4 | Acute toxicity (oral), Category 4 |
| 3.2/1A | Skin Corr. 1A | Skin corrosion, Category 1A |
| 3.2/1B | Skin Corr. 1B | Skin corrosion, Category 1B |
| 3.2/2 | Skin Irrit. 2 | Skin irritation, Category 2 |
| 3.3/1 | Eye Dam. 1 | Serious eye damage, Category 1 |
| 3.3/2 | Eye Irrit. 2 | Eye irritation, Category 2 |
| 3.8/3 | STOT SE 3 | Specific target organ toxicity — single exposure, Category 3 |
| 4.1/A1 | Aquatic Acute 1 | Acute aquatic hazard, category 1 |
| 4.1/C1 | Aquatic Chronic 1 | Chronic (long term) aquatic hazard, category 1 |
| 4.1/C2 | Aquatic Chronic 2 | Chronic (long term) aquatic hazard, category 2 |

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr. 1272/2008 Classification procedure

| | |
|-------------------------|----------------------------|
| Met. Corr. 1, H290 | On basis of test data |
| Skin Corr. 1A, H314 | On basis of test data (pH) |
| Eye Dam. 1, H318 | On basis of test data (pH) |
| Aquatic Acute 1, H400 | Calculation method |
| Aquatic Chronic 2, H411 | Calculation method |

If appropriate, specific provisions in relation to possible training for workers are mentioned in section 2. Any training related to safety in the workplace must in any case refer to a risk assessment that must be carried out by a company safety officer taking into account the specific operating and environmental conditions in which the products are used.

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

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities

SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold

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 SDS cancels and replaces any preceding release.

Legend to abbreviations and acronyms used in the safety data sheet:

ACGIH: American Conference of Governmental Industrial Hygienists

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

AND: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

ATE: Acute Toxicity Estimate

ATEmix: Acute toxicity Estimate (Mixtures)

BCF: Biological Concentration Factor

BEI: Biological Exposure Index

BOD: Biochemical Oxygen Demand

CAS: Chemical Abstracts Service (division of the American Chemical Society).

CAV: Poison Center

CE: European Community

CLP: Classification, Labeling, Packaging.

CMR: Carcinogenic, Mutagenic and Reprotoxic

COD: Chemical Oxygen Demand

COV: Volatile Organic Compound

CSA: Chemical Safety Assessment

CSR: Chemical Safety Report

DMEL: Derived Minimal Effect Level

DNEL: Derived No Effect Level.

DPD: Dangerous Preparations Directive

DSD: Dangerous Substances Directive

EC50: Half Maximal Effective Concentration

ECHA: European Chemicals Agency

EINECS: European Inventory of Existing Commercial Chemical Substances.

ES: Exposure Scenario
GefStoffVO: Ordinance on Hazardous Substances, Germany.
GHS: Globally Harmonized System of Classification and Labeling of Chemicals.
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association.
IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
IC50: half maximal inhibitory concentration
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.
IRCCS: Scientific Institute for Research, Hospitalization and Health Care
KAFH: KAFH
KSt: Explosion coefficient.
LC50: Lethal concentration, for 50 percent of test population.
LD50: Lethal dose, for 50 percent of test population.
LDLo: Leathal Dose Low
N.A.: Not Applicable
N/A: Not Applicable
N/D: Not defined/ Not available
NA: Not available
NIOSH: National Institute for Occupational Safety and Health
NOAEL: No Observed Adverse Effect Level
OSHA: Occupational Safety and Health Administration
PBT: Persistent, Bioaccumulative and Toxic
PGK: Packaging Instruction
PNEC: Predicted No Effect Concentration.
PSG: Passengers
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.
TWATLV: Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).
vPvB: Very Persistent, Very Bioaccumulative.
WGK: German Water Hazard Class.