# Safety Data Sheet
# HARDENER 547

**Safety Data Sheet dated 19/1/2023, version 18**

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

1.1. Product identifier

Mixture identification:

Trade name: HARDENER 547

Trade code: MIL1170B

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

HARDENER FOR VEPOLUX 519

1.3. Details of the supplier of the safety data sheet

Company:

N.V.S.C. Srl

VIA S. MARTINO, 6 - 15028 QUATTORDIO (AL) - ITALIA TEL. +39-0131-773403

Competent person responsible for the safety data sheet:

g.venezia@nvsc.it

1.4. Emergency telephone number

National Poison Information Service (NPIS) – Birmingham (UK) –director.birmingham.unit@npis.org
Croatian Insitute for Toxicology and Antidoping – Zagreb (HR) –+385 01 46 41 368
Centro de Informacao Antivenenos Instituto nacional de Emergencia Medica Lisboa (P)- +351 213 303 271
Norwegian Environment Agency – Trondheim (N) - +47 73 58 05 00 Bloemfontein Poison Control and Medicine
Information Centre – Bloemfontein (ZA) - +27 824 910 160
Israel Poison Information Centre – Haifa (IL) - +97 248 541 900
Swiss Toxicogical Information Centre – Zurich (CH) - +41 44 251 51 51
Ryadh Poison Control Center – Riyadh (SA) - +966 111 232 41 89 –pcc-riyadh@moh.gov.sa

## SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

EC regulation criteria 1272/2008 (CLP)

Danger, Flam. Liq. 2, Highly flammable liquid and vapour.

Warning, Acute Tox. 4, Harmful if swallowed.

Danger, Skin Corr. 1B, Causes severe skin burns and eye damage.

Danger, Eye Dam. 1, Causes serious eye damage.

Warning, Skin Sens. 1B, May cause an allergic skin reaction.

Warning, Repr. 2, Suspected of damaging fertility or the unborn child.

Warning, STOT SE 3, May cause drowsiness or dizziness.


Warning, STOT RE 2, May cause damage to organs through prolonged or repeated exposure.


Danger, Asp. Tox. 1, May be fatal if swallowed and enters airways.

EUH066 Repeated exposure may cause skin dryness or cracking.
EUH071 Corrosive to the respiratory tract.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Hazard pictograms:

Danger

Hazard statements:

H225 Highly flammable liquid and vapour.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H361 Suspected of damaging fertility or the unborn child.
H336 May cause drowsiness or dizziness.
H373 May cause damage to organs through prolonged or repeated exposure.
H304 May be fatal if swallowed and enters airways.

Precautionary statements:

P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor/...
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/doctor/...
P331 Do NOT induce vomiting.
P370+P378 In case of fire: Use ... to extinguish.
P403+P235 Store in a well-ventilated place. Keep cool.

Special Provisions:

EUH066 Repeated exposure may cause skin dryness or cracking.
EUH071 Corrosive to the respiratory tract.

Contains

benzyl alcohol
Copolimero di formaledide e anilina, idrogenato
M-FENILENEBIS (METILAMMINA)
toluene

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

N.A.

3.2. Mixtures

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

| Qty | Name | Ident. Number | Classification |
|---|---|---|---|
| >= 40% - < 50% | isobutyl acetate | Index number: 607-026-00-7<br>CAS: 110-19-0<br>EC: 203-745-1 | 2.6/2 Flam. Liq. 2 H225<br>EUH066 |
| >= 25% - < 30% | 1-methoxy-2-propanol; monopropylene glycol methyl ether | Index number: 603-064-00-3<br>CAS: 107-98-2<br>EC: 203-539-1<br>REACH No.: 01-2119457435-35 | 2.6/3 Flam. Liq. 3 H226<br>3.8/3 STOT SE 3 H336<br>Specific Concentration Limits:<br>C >= 20%: STOT SE 3 H336 |
| >= 10% - < 12.5% | benzyl alcohol | Index number: 603-057-00-5<br>CAS: 100-51-6<br>EC: 202-859-9<br>REACH No.: 01-2119492630-38 | 3.1/4/Oral Acute Tox. 4 H302<br>3.3/2 Eye Irrit. 2 H319<br>3.1/4/Inhal Acute Tox. 4 H332 |
| >= 10% - < 12.5% | toluene | Index number: 601-021-00-3<br>CAS: 108-88-3<br>EC: 203-625-9<br>REACH No.: 01-2119471310-51 | 2.6/2 Flam. Liq. 2 H225<br>3.7/2 Repr. 2 H361d<br>3.8/3 STOT SE 3 H336<br>3.10/1 Asp. Tox. 1 H304<br>3.2/2 Skin Irrit. 2 H315<br>3.9/2 STOT RE 2 H373<br>4.1/C3 Aquatic Chronic 3 H412<br>Specific Concentration Limits:<br>C >= 10%: Asp. Tox. 1 H304<br>C >= 10%: Skin Irrit. 2 H315<br>C >= 20%: STOT SE 3 H336<br>C >= 3%: Repr. 2 H361d<br>C >= 10%: STOT RE 2 H373<br>C >= 25%: Aquatic Chronic 3 H412<br>C >= 25%: Aquatic Chronic 4 H413 |
| >= 7% - | Copolimero di | CAS: 135108-88-2 | 3.1/4/Oral Acute Tox. 4 |

| | | | |
|---|---|---|---|
| < 10% | formaledide e anilina, idrogenato | EC: 603-894-6<br>REACH No.: 01-2119983522-33 | H302<br>3.3/1 Eye Dam. 1 H318<br>3.4.2/1B Skin Sens. 1B H317<br>3.9/2 STOT RE 2 H373<br>4.1/C3 Aquatic Chronic 3 H412<br>3.2/1B Skin Corr. 1B H314<br>Specific Concentration Limits:<br>C >= 5%: Skin Corr. 1B H314<br>C >= 5%: Skin Corr. 1C H314<br>1% <= C < 5%: Skin Irrit. 2 H315<br>C >= 3%: Eye Dam. 1 H318<br>1% <= C < 3%: Eye Irrit. 2 H319 |
| >= 3% - < 5% | M-FENILENEBIS (METILAMMINA) | CAS: 1477-55-0<br>EC: 216-032-5<br>REACH No.: 01-2119480150-50 | 3.1/4/Oral Acute Tox. 4 H302<br>3.3/1 Eye Dam. 1 H318<br>3.2/1B Skin Corr. 1B H314<br>3.4.2/1B Skin Sens. 1B H317<br>3.1/4/Inhal Acute Tox. 4 H332<br>4.1/C3 Aquatic Chronic 3 H412<br>EUH071<br>Specific Concentration Limits:<br>C >= 0,1%: EUH071<br>C >= 5%: Skin Corr. 1B H314<br>C >= 5%: Skin Corr. 1C H314<br>1% <= C < 5%: Skin Irrit. 2 H315<br>C >= 1%: Skin Sens. 1B H317<br>C >= 3%: Eye Dam. 1 H318<br>1% <= C < 3%: Eye Irrit. 2 H319<br>C >= 25%: Aquatic Chronic 3 H412<br>C >= 25%: Aquatic Chronic 4 H413 |
| >= 1% - < 2.5% | salicylic acid | Index number: 607-732-00-5<br>CAS: 69-72-7<br>EC: 200-712-3 | 3.7/2 Repr. 2 H361d<br>3.1/4/Oral Acute Tox. 4 H302<br>3.3/1 Eye Dam. 1 H318 |

## 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 immediatley 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 opthalmologist immediately.
Protect uninjured eye.

In case of Ingestion:

Do NOT induce vomiting.

In case of Inhalation:

If breathing is irregular or stopped, administer artificial respiration.
In case of inhalation, consult a doctor immediately and show him packing or label.

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:
Water.
Carbon dioxide (CO2).
In case of fire: Use ... to extinguish.
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.
Hazardous combustion products:

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.
Wear breathing apparatus if exposed to vapours/dusts/aerosols.
Provide adequate ventilation.
Use appropriate respiratory protection.
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.
Use localized ventilation system.
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:
Contamined clothing should be changed before entering eating areas.
Do not eat or drink while working.
7.2. Conditions for safe storage, including any incompatibilities
Keep away from food, drink and feed.
Incompatible materials:
None in particular.
Instructions as regards storage premises:
Adequately ventilated premises.
Packaging materials:
7.3. Specific end use(s)
None in particular

## SECTION 8: Exposure controls/personal protection

8.1. Control parameters
isobutyl acetate - CAS: 110-19-0
- OEL Type: ACGIH - TWA(8h): 50 ppm - STEL: 150 ppm - Notes: Eye and URT irr
- OEL Type: EU - TWA(8h): 241 mg/m3, 50 ppm - STEL: 723 mg/m3, 150 ppm

1-methoxy-2-propanol; monopropylene glycol methyl ether - CAS: 107-98-2
- OEL Type: EPY_OEL - TWA: 375 mg/m3, 100 ppm - STEL: 568 mg/m3, 150 ppm
- OEL Type: EPY_TLV-ACGIH - TWA: 369 mg/m3, 100 ppm - STEL: 553 mg/m3, 150 ppm
- OEL Type: EU - TWA(8h): 375 mg/m3, 100 ppm - STEL: 563 mg/m3, 150 ppm - Notes: Skin
- OEL Type: ACGIH - TWA(8h): 50 ppm - STEL: 100 ppm - Notes: A4 - Eye and URT irr

toluene - CAS: 108-88-3
- OEL Type: EPY_OEL - TWA: 192 mg/m3, 50 ppm - STEL: 384 mg/m3, 100 ppm
- OEL Type: EPY_TLV-ACGIH - TWA: 75.4 mg/m3, 20 ppm
- OEL Type: EPY_TLV - TWA: 50 mg/m3 - STEL: 100 mg/m3
- OEL Type: EPY_TLV - TWA: 50 mg/m3 - STEL: 100 mg/m3
- OEL Type: EU - TWA(8h): 192 mg/m3, 50 ppm - STEL: 384 mg/m3, 100 ppm - Notes: Skin
- OEL Type: ACGIH - TWA(8h): 20 ppm - Notes: OTO; A4; BEI - CNS, visual & hearing impair; female repro system eff; pregnancy loss

M-FENILENEBIS (METILAMMINA) - CAS: 1477-55-0
- OEL Type: EPY_TLV-ACGIH - STEL: .1 mg/m3
- OEL Type: EPY_TLV-ACGIH - STEL: .1 mg/m3
- OEL Type: ACGIH - STEL: Ceiling 0.018 ppm - Notes: Skin - Eye, skin, and GI irr

DNEL Exposure Limit Values

1-methoxy-2-propanol; monopropylene glycol methyl ether - CAS: 107-98-2
Consumer: 33 03 - Exposure: Human Dermal - Frequency: Long Term, systemic effects
Consumer: 43.9 04 - Exposure: Human Inhalation - Frequency: Long Term, systemic effects
Worker Professional: 553.5 04 - Exposure: Human Inhalation - Frequency: Short Term, systemic effects
Worker Professional: 369 04 - Exposure: Human Inhalation - Frequency: Long Term, systemic effects
Consumer: 78 03 - Exposure: Human Dermal - Frequency: Long Term, systemic effects
Worker Professional: 183 03 - Exposure: Human Dermal - Frequency: Long Term, systemic effects

benzyl alcohol - CAS: 100-51-6
Consumer: 25 03 - Exposure: Human Dermal - Frequency: Short Term, local effects
Consumer: 5 03 - Exposure: Human Dermal - Frequency: Long Term, systemic effects
Consumer: 40.55 04 - Exposure: Human Inhalation - Frequency: Short Term, local effects
Consumer: 8.11 04 - Exposure: Human Inhalation - Frequency: Long Term, systemic effects
Worker Professional: 450 04 - Exposure: Human Inhalation - Frequency: Short Term, systemic effects
Worker Professional: 90 04 - Exposure: Human Inhalation - Frequency: Long Term, systemic effects
Consumer: 28.5 03 - Exposure: Human Dermal - Frequency: Short Term, local effects
Consumer: 5.7 03 - Exposure: Human Dermal - Frequency: Long Term, systemic effects
Worker Professional: 47 03 - Exposure: Human Dermal - Frequency: Short Term, systemic effects
Worker Professional: 9.5 03 - Exposure: Human Dermal - Frequency: Long Term, systemic effects

toluene - CAS: 108-88-3
Consumer: 8.13 06 - Exposure: Human Dermal - Frequency: Long Term, systemic effects
Consumer: 56.5 04 - Exposure: Human Inhalation - Frequency: Long Term, systemic effects
Worker Professional: 192 04 - Exposure: Human Inhalation - Frequency: Long Term, systemic effects
Consumer: 226 06 - Exposure: Human Dermal - Frequency: Long Term, systemic effects
Worker Professional: 384 06 - Exposure: Human Dermal - Frequency: Long Term, systemic effects

PNEC Exposure Limit Values

1-methoxy-2-propanol; monopropylene glycol methyl ether - CAS: 107-98-2
Target: Fresh Water - Value: 10 mg/l
Target: Marine water - Value: 1 mg/l
Target: Freshwater sediments - Value: 52.3 mg/kg
Target: Marine water sediments - Value: 5.2 mg/kg
Target: 10 - Value: 100 mg/l
Target: Microorganisms in sewage treatments - Value: 100 mg/l
Target: 09 - Value: 4.59 mg/kg
benzyl alcohol - CAS: 100-51-6
Target: Fresh Water - Value: 1 mg/l
Target: Marine water - Value: 1 mg/l
Target: Freshwater sediments - Value: 527 04
Target: Marine water sediments - Value: 527 04
Target: 10 - Value: 23 mg/l
Target: Microorganisms in sewage treatments - Value: 39 mg/l
Target: 09 - Value: 456 04
toluene - CAS: 108-88-3
Target: Fresh Water - Value: 0.68 mg/l
Target: Marine water - Value: 0.68 mg/l
Target: Freshwater sediments - Value: 16.39 mg/kg
Target: Marine water sediments - Value: 16.39 mg/kg
Target: 10 - Value: 0.68 mg/l
Target: Microorganisms in sewage treatments - Value: 13.61 mg/l
Target: 09 - Value: 2.89 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:
Use protective gloves that provides comprehensive protection, e.g. P.V.C., neoprene or rubber.

Respiratory protection:
Use adequate protective respiratory equipment.

Thermal Hazards:
None

Environmental exposure controls:
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: | Liquid | -- | -- |
| Colour: | Amber | -- | -- |
| Odour: | Characteristic | -- | -- |
| Melting point/freezing point: | N.A. | -- | -- |

| | | | |
|---|---|---|---|
| Boiling point or initial boiling point and boiling range: | 110°C | -- | -- |
| Flammability: | Flam. Liq. 2, H225 | -- | -- |
| Lower and upper explosion limit: | N.A. | -- | -- |
| Flash point: | 5 ° C | -- | -- |
| Auto-ignition temperature: | 290°C | -- | -- |
| Decomposition temperature: | N.A. | -- | -- |
| pH: | N.A. | -- | -- |
| Kinematic viscosity: | <= 14 mm2/sec (40 °C) | -- | -- |
| Solubility in water: | INSOL | -- | -- |
| Solubility in oil: | N.A. | -- | -- |
| Partition coefficient n-octanol/water (log value): | N.A. | -- | -- |
| Vapour pressure: | N.A. | -- | -- |
| Density and/or relative density: | 0.9 g/ml | -- | -- |
| Relative vapour density: | N.A. | -- | -- |
| Particle characteristics: | | | |
| Particle size: | N.A. | -- | -- |

9.2. Other information

| **Properties** | **Value** | **Method:** | **Notes** |
|---|---|---|---|
| Explosive properties: | No | -- | -- |
| Viscosity: | <20.5 $mm^2/s$ 40°C | -- | -- |
| Oxidizing properties: | No | -- | -- |

## 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
None in particular.
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:

HARDENER 547

a) acute toxicity

The product is classified: Acute Tox. 4 H302

ATEmix - Oral 2000 mg/kg bw

b) skin corrosion/irritation

The product is classified: Skin Corr. 1B H314

c) serious eye damage/irritation

The product is classified: Eye Dam. 1 H318

d) respiratory or skin sensitisation

The product is classified: Skin Sens. 1B H317

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

The product is classified: Repr. 2 H361

h) STOT-single exposure

The product is classified: STOT SE 3 H336

i) STOT-repeated exposure

The product is classified: STOT RE 2 H373

j) aspiration hazard

The product is classified: Asp. Tox. 1 H304

Toxicological information of the main substances found in the product:

1-methoxy-2-propanol; monopropylene glycol methyl ether - CAS: 107-98-2

a) acute toxicity:

Test: LD50 - Route: EPY_DERMAL 13000 - Notes: Rabbit

Test: LC50 - Route: EPY_INHALATION 54.6 - Notes: Rat

Test: LD50 - Route: EPY_ORAL 5300 - Notes: Rat

benzyl alcohol - CAS: 100-51-6

a) acute toxicity:

Test: LD50 - Route: EPY_DERMAL 2000 - Notes: Rabbit

Test: LC50 - Route: EPY_INHALATION EPY_> 4.1 - Notes: Rat

Test: LD50 - Route: EPY_ORAL 1230 - Notes: Rat

toluene - CAS: 108-88-3

a) acute toxicity:

Test: LD50 - Route: EPY_DERMAL 12124 - Notes: Rabbit

Test: LC50 - Route: EPY_INHALATION 28.1 - Notes: Rat

Test: LD50 - Route: EPY_ORAL 5580 - Notes: Rat

Copolimero di formaledide e anilina, idrogenato - CAS: 135108-88-2

a) acute toxicity:

Test: LD50 - Route: EPY_DERMAL - Species: Rabbit EPY_> 1000 - Notes: coniglio

M-FENILENEBIS (METILAMMINA) - CAS: 1477-55-0

a) acute toxicity:

Test: LD50 - Route: EPY_DERMAL 3100 - Notes: Rat

Test: LC50 - Route: EPY_INHALATION 1.34 - Notes: Rat - Wistar

Test: LD50 - Route: EPY_ORAL EPY_> 200 - Notes: Rat - Sprague-Dawley

11.2. Information on other hazards

Endocrine disrupting properties:

No endocrine disruptor substances present in concentration >= 0.1%

## SECTION 12: Ecological information

12.1. Toxicity

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

HARDENER 547

Not classified for environmental hazards

Based on available data, the classification criteria are not met

M-FENILENEBIS (METILAMMINA) - CAS: 1477-55-0

a) Aquatic acute toxicity:

Endpoint: EPY_IC50 - Species: Algae 20.3 - Notes: Pseudokirchnerella subcapitata

Endpoint: EC50 - Species: Daphnia 15.2 - Notes: Daphnia magna

Endpoint: LC50 - Species: Fish 87.6 - Notes: Oryzias latipes

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

vPvB Substances: None - PBT Substances: None

12.6. Endocrine disrupting properties

No endocrine disruptor substances present in concentration >= 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: | 3469 |
| ADR/RID/ADN-UN Number: | 3469 |
| ADR/RID-UN Number: | 3469 |
| ADR/ADN-UN Number: | 3469 |

IATA-UN Number: 3469
IMDG-UN Number: 3469

14.2. UN proper shipping name

ADR-Shipping Name: PAINT, FLAMMABLE, CORROSIVE
ADR/RID-Shipping Name: PAINT, FLAMMABLE, CORROSIVE
ADR/ADN-Shipping Name: PAINT, FLAMMABLE, CORROSIVE
ADR/RID/ADN-Shipping Name: PAINT, FLAMMABLE, CORROSIVE
IATA-Shipping Name: PAINT, FLAMMABLE, CORROSIVE
IMDG-Shipping Name: PAINT, FLAMMABLE, CORROSIVE

14.3. Transport hazard class(es)

ADR-Class: 3
ADR/RID-Class: 3
ADR/ADN-Class: 3
ADR/RID/ADN-Class: 3
ADR - Hazard identification number: 338
IATA-Class: 3
IATA-Label: 3 + 8
IMDG-Class: 3

14.4. Packing group

ADR-Packing Group: II
ADR/RID-Packing Group: II
ADR/ADN-Packing Group: II
ADR/RID/ADN-Packing Group: II
IATA-Packing group: II
IMDG-Packing group: II

14.5. Environmental hazards

ADR-Enviromental Pollutant: No
IMDG-Marine pollutant: No
IMDG-EmS: F-E , S-C

14.6. Special precautions for user

ADR-Subsidiary hazards: 8
ADR-S.P.: 163 367
ADR-Transport category (Tunnel restriction code): 2 (D/E)
IATA-Passenger Aircraft: 352
IATA-Subsidiary hazards: 8
IATA-Cargo Aircraft: 363
IATA-S.P.: A3 A72 A192 A803
IATA-ERG: 3CH
IMDG-Subsidiary hazards: 8
IMDG-Stowage and handling: Category B SW2
IMDG-Segregation: -

14.7. Maritime transport in bulk according to IMO instruments

N.A.

## 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)
Regulation (EU) n. 2022/692 (ATP 18 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 48
Restriction 75

Where applicable, refer to the following regulatory provisions :

Directive 2012/18/EU (Seveso III)
Regulation (EC) nr 648/2004 (detergents).
Dir. 2004/42/EC (VOC directive)

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

Seveso III category according to Annex 1, part 1

Product belongs to category: P5c

15.2. Chemical safety assessment

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

## SECTION 16: Other information

Full text of phrases referred to in Section 3:

H225 Highly flammable liquid and vapour.
EUH066 Repeated exposure may cause skin dryness or cracking.
H226 Flammable liquid and vapour.
H336 May cause drowsiness or dizziness.
H302 Harmful if swallowed.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H361d Suspected of damaging the unborn child.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.

H373 May cause damage to organs through prolonged or repeated exposure.
H412 Harmful to aquatic life with long lasting effects.
H413 May cause long lasting harmful effects to aquatic life.
H318 Causes serious eye damage.
H317 May cause an allergic skin reaction.
H314 Causes severe skin burns and eye damage.
EUH071 Corrosive to the respiratory tract.

| Hazard class and hazard category | Code | Description |
|---|---|---|
| Flam. Liq. 2 | 2.6/2 | Flammable liquid, Category 2 |
| Flam. Liq. 3 | 2.6/3 | Flammable liquid, Category 3 |
| Acute Tox. 4 | 3.1/4/Inhal | Acute toxicity (inhalation), Category 4 |
| Acute Tox. 4 | 3.1/4/Oral | Acute toxicity (oral), Category 4 |
| Asp. Tox. 1 | 3.10/1 | Aspiration hazard, Category 1 |
| Skin Corr. 1B | 3.2/1B | Skin corrosion, Category 1B |
| Skin Corr. 1C | 3.2/1C | Skin corrosion, Category 1C |
| Skin Irrit. 2 | 3.2/2 | Skin irritation, Category 2 |
| Eye Dam. 1 | 3.3/1 | Serious eye damage, Category 1 |
| Eye Irrit. 2 | 3.3/2 | Eye irritation, Category 2 |
| Skin Sens. 1B | 3.4.2/1B | Skin Sensitisation, Category 1B |
| Repr. 2 | 3.7/2 | Reproductive toxicity, Category 2 |
| STOT SE 3 | 3.8/3 | Specific target organ toxicity - single exposure, Category 3 |
| STOT RE 2 | 3.9/2 | Specific target organ toxicity - repeated exposure, Category 2 |
| Aquatic Chronic 3 | 4.1/C3 | Chronic (long term) aquatic hazard, category 3 |
| Aquatic Chronic 4 | 4.1/C4 | Chronic (long term) aquatic hazard, category 4 |

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. 1272/2008 | Classification procedure |
|---|---|
| Flam. Liq. 2, H225 | On basis of test data |
| Acute Tox. 4, H302 | Calculation method |
| Skin Corr. 1B, H314 | Calculation method |
| Eye Dam. 1, H318 | Calculation method |
| Skin Sens. 1B, H317 | Calculation method |
| Repr. 2, H361 | Calculation method |
| STOT SE 3, H336 | Calculation method |
| STOT RE 2, H373 | Calculation method |
| Asp. Tox. 1, H304 | Calculation method |

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 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. |