# Safety Data Sheet

According to Annex II to REACH - Regulation 2020/878 and to Annex II to UK REACH

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

### 1.1. Product identifier

Product name **AS1620**

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

Intended use **Adhesive sealant.**

### 1.3. Details of the supplier of the safety data sheet

Name **CHT UK BRIDGWATER LTD**
Full address **Amber House Showground Road**
District and Country **TA6 6AJ Bridgwater (Somerset)**
**England**
**Tel. +44(0)1278411400**
**Fax +44(0)1278411444**

e-mail address of the competent person responsible for the Safety Data Sheet **info.uk@cht.com**

Supplier: **CHT Germany GmbH**
**Bismarckstraße 102**
**72072 Tübingen**
**Germany**

### 1.4. Emergency telephone number

For urgent inquiries refer to **Australia: 0418529118**
**All other enquiries +44(0)1278 411400**

## SECTION 2. Hazards identification

### 2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2020/878.
Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

| | | |
|---|---|---|
| Skin sensitization, category 1 | H317 | May cause an allergic skin reaction. |
| Hazardous to the aquatic environment, chronic toxicity, category 3 | H412 | Harmful to aquatic life with long lasting effects. |

### 2.2. Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:

Signal words: Warning

Hazard statements:

| | |
|---|---|
| **H317** | May cause an allergic skin reaction. |
| **H412** | Harmful to aquatic life with long lasting effects. |

## SECTION 2. Hazards identification ... / >>

Precautionary statements:

| | |
|---|---|
| **P280** | Wear protective gloves. |
| **P261** | Avoid breathing dust / fume / gas / mist / vapours / spray. |
| **P333+P313** | If skin irritation or rash occurs: Get medical advice / attention. |
| **P362+P364** | Take off contaminated clothing and wash it before reuse. |

**Contains:** VINYLTRIS (2-BUTANONEOXIME) SILANE
BUTAN-2-ONE O, O', O", O'" -SILANETETRAYLTETRAOXIME

### 2.3. Other hazards

vPvB substances contained:
DODECAMETHYL CYCLOHEXASILOXANE

PBT substances contained:
DODECAMETHYL CYCLOHEXASILOXANE

The product does not contain substances with endocrine disrupting properties in concentration ≥ 0.1%.

## SECTION 3. Composition/information on ingredients

### 3.1. Substances

Information not relevant

### 3.2. Mixtures

Contains:

| Identification | x = Conc. % | Classification (EC) 1272/2008 (CLP) |
|---|---|---|
| **VINYLTRIS (2-BUTANONEOXIME) SILANE** | | |
| *CAS* *2224-33-1* | 2.5 ≤ x < 3 | **STOT RE 2 H373, Eye Dam. 1 H318, Skin Sens. 1 H317** |
| *EC* *218-747-8* | | |
| *INDEX* | | |
| *REACH Reg.* *01-2119970537-27* | | |
| **BUTAN-2-ONE O, O', O", O'" -SILANETETRAYLTETRAOXIME** | | |
| *CAS* *34206-40-1* | 0.6 ≤ x < 0.7 | **Flam. Sol. 1 H228, STOT RE 2 H373, Eye Irrit. 2 H319, Skin Sens. 1 H317** |
| *EC* *251-882-0* | | |
| *INDEX* | | |
| *REACH Reg.* *01-2119982966-14* | | |
| **DODECAMETHYL CYCLOHEXASILOXANE** | | |
| *CAS* *540-97-6* | 0.1 ≤ x < 0.2 | **Substance PBT** |
| *EC* *208-762-8* | | **Substance vPvB** |
| *INDEX* | | |
| *REACH Reg.* *01-2119517435-42* | | |
| **OCTAMETHYLCYCLOTETRASILOXANE** | | |
| *CAS* *556-67-2* | 0.025 ≤ x < 0.13 | **Repr. 2 H361f, Aquatic Chronic 1 H410 M=10** |
| *EC* *209-136-7* | | |
| *INDEX* | | |
| *REACH Reg.* *01-2119529238-36* | | |

The full wording of hazard (H) phrases is given in section 16 of the sheet.

## SECTION 4. First aid measures

### 4.1. Description of first aid measures

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 30-60 minutes, opening the eyelids fully. Get medical advice/attention.
SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention.
INGESTION: Have the subject drink as much water as possible. Get medical advice/attention. Do not induce vomiting unless explicitly authorised by a doctor.
INHALATION: Get medical advice/attention immediately. Remove victim to fresh air, away from the accident scene. If the subject stops breathing, administer artificial respiration. Take suitable precautions for rescue workers.

## SECTION 4. First aid measures ... / >>

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

Specific information on symptoms and effects caused by the product are unknown.

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

Information not available

## SECTION 5. Firefighting measures

### 5.1. Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT
The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.
UNSUITABLE EXTINGUISHING EQUIPMENT
None in particular.

### 5.2. Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE
Do not breathe combustion products.

### 5.3. Advice for firefighters

GENERAL INFORMATION
Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.
SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS
Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

## SECTION 6. Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

Block the leakage if there is no hazard.
Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

### 6.2. Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

### 6.3. Methods and material for containment and cleaning up

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.
Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

### 6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

## SECTION 7. Handling and storage

### 7.1. Precautions for safe handling

Before handling the product, consult all the other sections of this material safety data sheet. Avoid leakage of the product into the environment. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat.

### 7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Keep containers away from any incompatible materials, see section 10 for details.

## SECTION 7. Handling and storage ... / >>

### 7.3. Specific end use(s)

Information not available

## SECTION 8. Exposure controls/personal protection

### 8.1. Control parameters

Regulatory References:

RCP TLV ACGIH TLVs and BEIs – Appendix H

**VINYLTRIS (2-BUTANONEOXIME) SILANE**

| | | |
|---|---|---|
| **Predicted no-effect concentration - PNEC** | | |
| Normal value in fresh water | 0.26 | mg/l |
| Normal value in marine water | 0.026 | mg/l |
| Normal value for fresh water sediment | 1.02 | mg/kg |
| Normal value for marine water sediment | 0.102 | mg/kg/d |
| Normal value for water, intermittent release | 0.12 | mg/l |
| Normal value of STP microorganisms | 10 | mg/l |
| Normal value for the terrestrial compartment | 0.05 | mg/kg/d |

**Health - Derived no-effect level - DNEL / DMEL**

| | Effects on consumers | | | | Effects on workers | | | |
|---|---|---|---|---|---|---|---|---|
| Route of exposure | Acute local | Acute systemic | Chronic local | Chronic systemic | Acute local | Acute systemic | Chronic local | Chronic systemic |
| Oral | | | VND | 0.052 mg/kg bw/d | | | | |
| Inhalation | VND | 0.181 mg/m3 | | | | | VND | 1.03 mg/m3 |
| Skin | | | VND | 0.052 mg/kg bw/d | | | VND | 0.146 mg/kg bw/d |

**DODECAMETHYL CYCLOHEXASILOXANE**

**Threshold Limit Value**

| Type | Country | TWA/8h | | STEL/15min | | Remarks / Observations |
|---|---|---|---|---|---|---|
| | | mg/m3 | ppm | mg/m3 | ppm | |
| RCP TLV | | | 10 | | | RESP |

| | | |
|---|---|---|
| **Predicted no-effect concentration - PNEC** | | |
| Normal value for fresh water sediment | 2.826 | mg/kg |
| Normal value for marine water sediment | 0.282 | mg/kg |
| Normal value of STP microorganisms | 1 | mg/l |
| Normal value for the terrestrial compartment | 3.336 | mg/kg |

**Health - Derived no-effect level - DNEL / DMEL**

| | Effects on consumers | | | | Effects on workers | | | |
|---|---|---|---|---|---|---|---|---|
| Route of exposure | Acute local | Acute systemic | Chronic local | Chronic systemic | Acute local | Acute systemic | Chronic local | Chronic systemic |
| Oral | | | | 1.7 mg/kg bw/d | | | | |
| Inhalation | | | 0.3 mg/m3 | 2.7 mg/m3 | | | 1.22 mg/m3 | 11 mg/m3 |

**OCTAMETHYLCYCLOTETRASILOXANE**

| | | |
|---|---|---|
| **Predicted no-effect concentration - PNEC** | | |
| Normal value in marine water | 0.044 | mg/l |
| Normal value for fresh water sediment | 0.128 | mg/kg |
| Normal value of STP microorganisms | 100 | mg/l |
| Normal value for the terrestrial compartment | 0.16 | mg/kg |

**Health - Derived no-effect level - DNEL / DMEL**

| | Effects on consumers | | | | Effects on workers | | | |
|---|---|---|---|---|---|---|---|---|
| Route of exposure | Acute local | Acute systemic | Chronic local | Chronic systemic | Acute local | Acute systemic | Chronic local | Chronic systemic |
| Inhalation | 61 mg/m3 | 305 mg/m3 | 61 mg/m3 | 305 mg/m3 | | | | |

Legend:
(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

## SECTION 8. Exposure controls/personal protection ... / >>

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified.

### 8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.
When choosing personal protective equipment, ask your chemical substance supplier for advice.
Personal protective equipment must be CE marked, showing that it complies with applicable standards.
Provide an emergency shower with face and eye wash station.
HAND PROTECTION
Protect hands with category III work gloves (see standard EN 374).
The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.
The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.
SKIN PROTECTION
Wear category II professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.
EYE PROTECTION
Wear airtight protective goggles (see standard EN 166).
RESPIRATORY PROTECTION
If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, use a mask with a type A filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.
Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.
If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.
ENVIRONMENTAL EXPOSURE CONTROLS
The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.
Product residues must not be indiscriminately disposed of with waste water or by dumping in waterways.

## SECTION 9. Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

| Properties | | Value | Information |
|---|---|---|---|
| Appearance | | viscous liquid | |
| Colour | | colourless | |
| Odour | | characteristic | |
| Melting point / freezing point | | Not available | |
| Initial boiling point | | Not available | |
| Flammability | | Not available | |
| Lower explosive limit | | Not available | |
| Upper explosive limit | | Not available | |
| Flash point | > | 150 °C | |
| Auto-ignition temperature | > | 400 °C | |
| pH | | Not available | |
| Kinematic viscosity | | 25000 cSt | |
| Dynamic viscosity | | 26000 mPas | |
| Solubility | | immiscible with water | |
| Partition coefficient: n-octanol/water | | Not available | |
| Vapour pressure | | Not available | |
| Density and/or relative density | | 1.04 | |
| Relative vapour density | | Not available | |
| Particle characteristics | | Not applicable | |

### 9.2. Other information

9.2.1. Information with regard to physical hazard classes

Information not available

9.2.2. Other safety characteristics

## SECTION 9. Physical and chemical properties ... / >>

| | | | | |
|---|---|---|---|---|
| VOC (Directive 2010/75/EU) | 3.84 % | - | 39.91 | g/litre |

## SECTION 10. Stability and reactivity

**10.1. Reactivity**

There are no particular risks of reaction with other substances in normal conditions of use.

**10.2. Chemical stability**

The product is stable in normal conditions of use and storage.

**10.3. Possibility of hazardous reactions**

No hazardous reactions are foreseeable in normal conditions of use and storage.

**10.4. Conditions to avoid**

None in particular. However the usual precautions used for chemical products should be respected.

**10.5. Incompatible materials**

Information not available

**10.6. Hazardous decomposition products**

Information not available

## SECTION 11. Toxicological information

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.
It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

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

Metabolism, toxicokinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

Information not available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Information not available

Interactive effects

Information not available

ACUTE TOXICITY

| | |
|---|---|
| ATE (Inhalation) of the mixture: | Not classified (no significant component) |
| ATE (Oral) of the mixture: | Not classified (no significant component) |
| ATE (Dermal) of the mixture: | Not classified (no significant component) |

VINYLTRIS (2-BUTANONEOXIME) SILANE

| | |
|---|---|
| LD50 (Dermal): | > 2009 mg/kg |
| LD50 (Oral): | > 2000 mg/kg |

BUTAN-2-ONE O, O', O", O'" -SILANETETRAYLTETRAOXIME

| | |
|---|---|
| LD50 (Oral): | 2528 mg/kg |

OCTAMETHYLCYCLOTETRASILOXANE

| | |
|---|---|
| LD50 (Dermal): | > 2375 mg/kg Rat |
| LD50 (Oral): | 4800 mg/kg Rat, male |

## SECTION 11. Toxicological information ... / >>

LC50 (Inhalation vapours): 36 mg/l/4h Rat, male and female

SKIN CORROSION / IRRITATION

Does not meet the classification criteria for this hazard class

SERIOUS EYE DAMAGE / IRRITATION

Does not meet the classification criteria for this hazard class

RESPIRATORY OR SKIN SENSITISATION

Sensitising for the skin

Respiratory sensitization

Information not available

Skin sensitization

Information not available

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

Adverse effects on sexual function and fertility

Information not available

Adverse effects on development of the offspring

Information not available

Effects on or via lactation

Information not available

STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

Target organs

Information not available

Route of exposure

Information not available

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

Target organs

Information not available

Route of exposure

Information not available

## SECTION 11. Toxicological information ... / >>

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

**11.2. Information on other hazards**

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with human health effects under evaluation.

## SECTION 12. Ecological information

This product is dangerous for the environment and the aquatic organisms. In the long term, it have negative effects on aquatic environment.

**12.1. Toxicity**

VINYLTRIS (2-BUTANONEOXIME) SILANE

| | |
|---|---|
| LC50 - for Fish | > 100 mg/l/96h |
| Chronic NOEC for Fish | > 100 mg/l |

OCTAMETHYLCYCLOTETRASILOXANE

| | |
|---|---|
| LC50 - for Fish | > 0.022 mg/l/96h Oncorhynchus mykiss |
| EC50 - for Crustacea | 0.015 mg/l/48h Daphnia magna |
| EC10 for Algae / Aquatic Plants | > 0.022 mg/l/96h Pseudokirchneriella subcapitata |
| Chronic NOEC for Fish | > 0.0044 mg/l Oncorhynchus mykiss |
| Chronic NOEC for Crustacea | > 0.0015 mg/l Daphnia magna |

**12.2. Persistence and degradability**

VINYLTRIS (2-BUTANONEOXIME) SILANE
NOT rapidly degradable

**12.3. Bioaccumulative potential**

Information not available

**12.4. Mobility in soil**

Information not available

**12.5. Results of PBT and vPvB assessment**

vPvB substances contained:
DODECAMETHYL CYCLOHEXASILOXANE

PBT substances contained:
DODECAMETHYL CYCLOHEXASILOXANE

**12.6. Endocrine disrupting properties**

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with environmental effects under evaluation.

**12.7. Other adverse effects**

Information not available

## SECTION 13. Disposal considerations

**13.1. Waste treatment methods**

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.
Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.
CONTAMINATED PACKAGING
Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

## SECTION 14. Transport information

The product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and of the International Air Transport Association (IATA) regulations.

**14.1. UN number or ID number**

Not applicable

**14.2. UN proper shipping name**

Not applicable

**14.3. Transport hazard class(es)**

Not applicable

**14.4. Packing group**

Not applicable

**14.5. Environmental hazards**

Not applicable

**14.6. Special precautions for user**

Not applicable

**14.7. Maritime transport in bulk according to IMO instruments**

Information not relevant

## SECTION 15. Regulatory information

Austrailia AICS: On or in compliance with the inventory.
Canada DSL Inventory List: On or in compliance with the inventory.
EINECS, ELINCS or NLP: On or in compliance with the inventory.
Japan (ENCS) List: On or in compliance with the inventory.
China Inv. Existing Chemical Substances: On or in compliance with the inventory.
Korea Existing Chemicals Inv. (KECI): On or in compliance with the inventory.
Philippines PICCS: On or in compliance with the inventory.
US TSCA Inventory: On or in compliaince with the inventory.
New Zealand Inventory of Chemicals: On or in compliance with the inventory.
Taiwan Chemical Substance Inventory: On or in compliance with the inventory.

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

Seveso Category - Directive 2012/18/EU: None

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

| | | |
|---|---|---|
| Product | | |
| Point | 3 - 40 | |
| Contained substance | | |
| Point | 75 | |
| Point | 70 | OCTAMETHYLCYCLOTETRASILOXANE<br>REACH Reg.: 01-2119529238-36 |

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors
Not applicable

## SECTION 15. Regulatory information ... / >>

Substances in Candidate List (Art. 59 REACH)
DODECAMETHYL CYCLOHEXASILOXANE
REACH Reg.: 01-2119517435-42

OCTAMETHYLCYCLOTETRASILOXANE
REACH Reg.: 01-2119529238-36

Substances subject to authorisation (Annex XIV REACH)
None

Substances subject to exportation reporting pursuant to Regulation (EU) 649/2012:
None

Substances subject to the Rotterdam Convention:
None

Substances subject to the Stockholm Convention:
None

Healthcare controls
Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

German regulation on the classification of substances hazardous to water (AwSV, vom 18. April 2017)
WGK 1: Low hazard to waters

### 15.2. Chemical safety assessment

A chemical safety assessment has not been performed for the preparation/for the substances indicated in section 3.

## SECTION 16. Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

| | |
|---|---|
| **Flam. Sol. 1** | Flammable solid, category 1 |
| **Repr. 2** | Reproductive toxicity, category 2 |
| **STOT RE 2** | Specific target organ toxicity - repeated exposure, category 2 |
| **Eye Dam. 1** | Serious eye damage, category 1 |
| **Skin Sens. 1** | Skin sensitization, category 1 |
| **Aquatic Chronic 1** | Hazardous to the aquatic environment, chronic toxicity, category 1 |
| **Aquatic Chronic 3** | Hazardous to the aquatic environment, chronic toxicity, category 3 |
| **H228** | Flammable solid. |
| **H361f** | Suspected of damaging fertility. |
| **H373** | May cause damage to organs through prolonged or repeated exposure. |
| **H318** | Causes serious eye damage. |
| **H317** | May cause an allergic skin reaction. |
| **H410** | Very toxic to aquatic life with long lasting effects. |
| **H412** | Harmful to aquatic life with long lasting effects. |

LEGEND:
- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE: Identifier in ESIS (European archive of existing substances)
- CLP: Regulation (EC) 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation

## SECTION 16. Other information ... / >>

- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: Regulation (EC) 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA: Time-weighted average exposure limit
- TWA STEL: Short-term exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 2020/878 (II Annex of REACH Regulation)
4. Regulation (EC) 790/2009 (I Atp. CLP) of the European Parliament
5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
12. Regulation (EU) 2016/1179 (IX Atp. CLP)
13. Regulation (EU) 2017/776 (X Atp. CLP)
14. Regulation (EU) 2018/669 (XI Atp. CLP)
15. Regulation (EU) 2019/521 (XII Atp. CLP)
16. Delegated Regulation (UE) 2018/1480 (XIII Atp. CLP)
17. Regulation (EU) 2019/1148
18. Delegated Regulation (UE) 2020/217 (XIV Atp. CLP)
19. Delegated Regulation (UE) 2020/1182 (XV Atp. CLP)
20. Delegated Regulation (UE) 2021/643 (XVI Atp. CLP)
21. Delegated Regulation (UE) 2021/849 (XVII Atp. CLP)

- The Merck Index. - 10th Edition
- Handling Chemical Safety
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- IFA GESTIS website
- ECHA website
- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

Note for users:
The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.
This document must not be regarded as a guarantee on any specific product property.
The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.
Provide appointed staff with adequate training on how to use chemical products.

CALCULATION METHODS FOR CLASSIFICATION
Chemical and physical hazards: Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.
Health hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.
Environmental hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.

Changes to previous review:
The following sections were modified:
09.