

# Safety Data Sheet

According to Annex II to REACH - Regulation (EU) 2020/878

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

### 1.1. Product identifier

Code: 0470242P  
Product name: SYNTECH WATERPROOF PU  
UFI: R7H1-A04F-U00C-GNMC

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

Intended use: Waterproofing, transparent and elastic polyurethane resin

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

Name: AZICHEM SRL  
Full address: Via G. Gentile 16/A  
District and Country: 46044 Goito (Mantova) Italia  
Tel.: 0376604185  
e-mail address of the competent person responsible for the Safety Data Sheet: laboratorio@azichem.com

### 1.4. Emergency telephone number

For urgent inquiries refer to:  
Osp. Pediatrico Bambino Gesù ROMA: 06 68593726  
Az. Osp. Univ. Foggia FOGGIA: 800183459  
Az. Osp. "A. Cardarelli" NAPOLI: 081-5453333  
Policlinico "Umberto I" ROMA: 06-49978000  
Policlinico "A. Gemelli" ROMA: 06-3054343  
Az. Osp. "Careggi" U.O. Tossicologia Medica FIRENZE: 055-7947819  
Centro Nazionale di Informazione Tossicologica PAVIA: 0382-24444  
Osp. Niguarda Ca' Granda MILANO: 02-66101029  
Azienda Ospedaliera Papa Giovanni XXII BERGAMO: 800883300  
Azienda Ospedaliera Integrata VERONA: 800011858

## 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:

|                                                                    |       |                                                                            |
|--------------------------------------------------------------------|-------|----------------------------------------------------------------------------|
| Flammable liquid, category 3                                       | H226  | Flammable liquid and vapour.                                               |
| Reproductive toxicity, category 1B                                 | H360D | May damage the unborn child.                                               |
| Acute toxicity, category 4                                         | H332  | Harmful if inhaled.                                                        |
| Aspiration hazard, category 1                                      | H304  | May be fatal if swallowed and enters airways.                              |
| Specific target organ toxicity - repeated exposure, category 2     | H373  | May cause damage to organs through prolonged or repeated exposure.         |
| Skin irritation, category 2                                        | H315  | Causes skin irritation.                                                    |
| Specific target organ toxicity - single exposure, category 3       | H335  | May cause respiratory irritation.                                          |
| Respiratory sensitization, category 1                              | H334  | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| 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.                         |

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

### 2.2. Label elements

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

Hazard pictograms:



Signal words: Danger

Hazard statements:

|               |                                                                                              |
|---------------|----------------------------------------------------------------------------------------------|
| <b>H226</b>   | Flammable liquid and vapour.                                                                 |
| <b>H360D</b>  | May damage the unborn child.                                                                 |
| <b>H332</b>   | Harmful if inhaled.                                                                          |
| <b>H304</b>   | May be fatal if swallowed and enters airways.                                                |
| <b>H373</b>   | May cause damage to organs through prolonged or repeated exposure.                           |
| <b>H315</b>   | Causes skin irritation.                                                                      |
| <b>H335</b>   | May cause respiratory irritation.                                                            |
| <b>H334</b>   | May cause allergy or asthma symptoms or breathing difficulties if inhaled.                   |
| <b>H317</b>   | May cause an allergic skin reaction.                                                         |
| <b>H412</b>   | Harmful to aquatic life with long lasting effects.                                           |
| <b>EUH204</b> | Contains isocyanates. May produce an allergic reaction.<br>Restricted to professional users. |

Precautionary statements:

|                  |                                                                                                |
|------------------|------------------------------------------------------------------------------------------------|
| <b>P210</b>      | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. |
| <b>P331</b>      | Do NOT induce vomiting.                                                                        |
| <b>P261</b>      | Avoid breathing dust / fume / gas / mist / vapours / spray.                                    |
| <b>P201</b>      | Obtain special instructions before use.                                                        |
| <b>P280</b>      | Wear protective gloves/ protective clothing / eye protection / face protection.                |
| <b>P308+P313</b> | IF exposed or concerned: Get medical advice / attention.                                       |

**Contains:** 2-METHOXYPROPYL ACETATE  
XYLENE  
ISOPHORONE DI-ISOCYANATE  
Aliphatic polyurethane polymer  
1,6-hexanediyl-bis(2-(2-(1-ethylpentyl)-3-oxazolidinyl)ethyl)carbamate  
Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate

As from 24 August 2023 adequate training is required before industrial or professional use.

### 2.3. Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage  $\geq$  than 0,1%.

The product does not contain substances with endocrine disrupting properties in concentration  $\geq$  0.1%.

## SECTION 3. Composition/information on ingredients

### 3.2. Mixtures

Contains:

| Identification                             | x = Conc. %        | Classification (EC) 1272/2008 (CLP)                                                                                                                                                                      |
|--------------------------------------------|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>XYLENE</b><br><i>INDEX</i> 601-022-00-9 | 35 $\leq$ x < 37,5 | <b>Flam. Liq. 3 H226, Acute Tox. 4 H312, Acute Tox. 4 H332, Asp. Tox. 1 H304, STOT RE 2 H373, Skin Irrit. 2 H315, STOT SE 3 H335, Classification note according to Annex VI to the CLP Regulation: C</b> |
| <i>EC</i> 215-535-7                        |                    | <b>ATE Dermal: 1100 mg/kg, ATE Inhalation vapours: 11 mg/l</b>                                                                                                                                           |

### SECTION 3. Composition/information on ingredients ... / >>

|                                                                               |                       |                    |                                                                                                                                                                                                                    |
|-------------------------------------------------------------------------------|-----------------------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CAS                                                                           | 1330-20-7             |                    |                                                                                                                                                                                                                    |
| <b>Aliphatic polyurethane polymer</b>                                         |                       |                    |                                                                                                                                                                                                                    |
| INDEX                                                                         |                       | $35 \leq x < 37,5$ | <b>Skin Sens. 1 H317</b>                                                                                                                                                                                           |
| EC                                                                            |                       |                    |                                                                                                                                                                                                                    |
| CAS                                                                           | 39323-37-0            |                    |                                                                                                                                                                                                                    |
| <b>2-METHOXY-1-METHYLETHYL ACETATE</b>                                        |                       |                    |                                                                                                                                                                                                                    |
| INDEX                                                                         | 607-195-00-7          | $15 \leq x < 16,5$ | <b>Flam. Liq. 3 H226</b>                                                                                                                                                                                           |
| EC                                                                            | 203-603-9             |                    |                                                                                                                                                                                                                    |
| CAS                                                                           | 108-65-6              |                    |                                                                                                                                                                                                                    |
| <b>ETHYLBENZENE</b>                                                           |                       |                    |                                                                                                                                                                                                                    |
| INDEX                                                                         | 601-023-00-4          | $5 \leq x < 6$     | <b>Flam. Liq. 2 H225, Acute Tox. 4 H332, Asp. Tox. 1 H304, STOT RE 2 H373, Aquatic Chronic 3 H412</b>                                                                                                              |
| EC                                                                            | 202-849-4             |                    | <b>LC50 Inhalation vapours: 17,2 mg/l/4h</b>                                                                                                                                                                       |
| CAS                                                                           | 100-41-4              |                    |                                                                                                                                                                                                                    |
| <b>1,6-hexanediyl-bis(2-(2-(1-ethylpentyl)-3-oxazolidinyl)ethyl)carbamate</b> |                       |                    |                                                                                                                                                                                                                    |
| INDEX                                                                         | 616-079-00-5          | $5 \leq x < 6$     | <b>Skin Sens. 1 H317</b>                                                                                                                                                                                           |
| EC                                                                            | 411-700-4             |                    |                                                                                                                                                                                                                    |
| CAS                                                                           | 140921-24-0           |                    |                                                                                                                                                                                                                    |
| REACH Reg.                                                                    | 01-2119890830-32-XXXX |                    |                                                                                                                                                                                                                    |
| <b>2-METHOXYPROPYL ACETATE</b>                                                |                       |                    |                                                                                                                                                                                                                    |
| INDEX                                                                         | 607-251-00-0          | $0,9 \leq x < 1$   | <b>Flam. Liq. 3 H226, Repr. 1B H360D, STOT SE 3 H335</b>                                                                                                                                                           |
| EC                                                                            | 274-724-2             |                    |                                                                                                                                                                                                                    |
| CAS                                                                           | 70657-70-4            |                    |                                                                                                                                                                                                                    |
| <b>ISOPHORONE DI-ISOCYANATE</b>                                               |                       |                    |                                                                                                                                                                                                                    |
| INDEX                                                                         | 615-008-00-5          | $0,9 \leq x < 1$   | <b>Acute Tox. 1 H330, Eye Irrit. 2 H319, Skin Irrit. 2 H315, STOT SE 3 H335, Resp. Sens. 1 H334, Skin Sens. 1 H317, Aquatic Chronic 2 H411, Classification note according to Annex VI to the CLP Regulation: 2</b> |
| EC                                                                            | 223-861-6             |                    | <b>Skin Sens. 1 H317: <math>\geq 0,5\%</math>, Resp. Sens. 1 H334: <math>\geq 0,5\%</math></b>                                                                                                                     |
| CAS                                                                           | 4098-71-9             |                    | <b>LC50 Inhalation mists/powders: 0,04 mg/l/4h</b>                                                                                                                                                                 |
| REACH Reg.                                                                    | 01-2119490408-31      |                    |                                                                                                                                                                                                                    |
| <b>Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate</b>                        |                       |                    |                                                                                                                                                                                                                    |
| INDEX                                                                         |                       | $0,89 \leq x < 1$  | <b>Skin Sens. 1 H317, Aquatic Acute 1 H400 M=1, Aquatic Chronic 1 H410 M=1</b>                                                                                                                                     |
| EC                                                                            | 255-437-1             |                    |                                                                                                                                                                                                                    |
| CAS                                                                           | 41556-26-7            |                    |                                                                                                                                                                                                                    |
| REACH Reg.                                                                    | 01-2119491304-40-0000 |                    |                                                                                                                                                                                                                    |

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

In case of doubt or in the presence of symptoms contact a doctor and show him this document.

In case of more severe symptoms, ask for immediate medical aid.

EYES: Remove, if present, contact lenses if the situation allows you to do so easily. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. Get medical advice/attention.

SKIN: Take off immediately all contaminated clothing. Wash immediately and thoroughly with running water (and soap if possible). Get medical advice/attention. Avoid further contact with contaminated clothing.

INGESTION: Do not induce vomiting unless explicitly authorised by a doctor. Do not give anything by mouth to an unconscious person. Get medical advice/attention.

INHALATION: Remove victim to fresh air, away from the accident scene. In the event of respiratory symptoms (coughing, wheezing, breathing difficulty, asthma) keep the victim in a comfortable position for breathing. If necessary administer oxygen. If the subject stops breathing, administer artificial respiration. Get medical advice/attention.

#### Rescuer protection

It is good practice for rescuers lending support to a person who has been exposed to a chemical substance or to a mixture to wear personal protective equipment. The nature of such protection depends on the hazard level of the substance or mixture, on the type of exposure and on the extent of the contamination. In the absence of other more specific indications, use of disposable gloves in the event of possible contact with body fluids is recommended. For the type of PPE suitable for the characteristics of the substance or mixture, see section 8.

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

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

DELAYED EFFECTS: Based on the information currently available, there are no known cases of delayed effects following exposure to this product.

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

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

IF exposed or concerned: Get medical advice / attention.

Means to have available in the workplace for specific and immediate treatment

Running water for skin and eye wash.

## SECTION 5. Firefighting measures

### 5.1. Extinguishing media

#### SUITABLE EXTINGUISHING EQUIPMENT

Extinguishing substances are: carbon dioxide, foam, chemical powder. For product loss or leakage that has not caught fire, water spray can be used to disperse flammable vapours and protect those trying to stem the leak.

#### UNSUITABLE EXTINGUISHING EQUIPMENT

Do not use jets of water. Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.

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

#### HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Excess pressure may form in containers exposed to fire at a risk of explosion. 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.

Send away individuals who are not suitably equipped. Use explosion-proof equipment. Eliminate all sources of ignition (cigarettes, flames, sparks, etc.) from the leakage site.

### 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

Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Without adequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. When performing transfer operations involving large containers, connect to an earthing system and wear antistatic footwear. Vigorous stirring and flow through the tubes and equipment may cause the formation and accumulation of electrostatic charges. In order to avoid the risk of fires and explosions, never use compressed air when handling. Open containers with caution as they may be pressurised. Do not eat, drink or smoke during use. Avoid leakage of the product into the environment.

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

### 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. Store in a cool and well ventilated place, keep far away from sources of heat, naked flames and sparks and other sources of ignition. Keep containers away from any incompatible materials, see section 10 for details.

#### 2-METHOXY-1-METHYLETHYL ACETATE

Store in an inert atmosphere, sheltered from moisture because it hydrolyses easily.

### 7.3. Specific end use(s)

Information not available

## SECTION 8. Exposure controls/personal protection

### 8.1. Control parameters

Regulatory references:

|     |                |                                                                                                                                                                                                                                                                                                                                                       |
|-----|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BGR | България       | НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г. ЗА ЗАЩИТА НА РАБОТЕЩИТЕ ОТ РИСКОВЕ, СВЪРЗАНИ С ЕКСПОЗИЦИЯ НА ХИМИЧНИ АГЕНТИ ПРИ РАБОТА (изм. ДВ. бр.28 от 2 Април 2024г.)                                                                                                                                                                                         |
| DEU | Deutschland    | WirkungDosisNOAELMAK-und BAT-Werte-Liste 2024 Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe                                                                                                                                                                                                                              |
| ESP | España         | Límites de exposición profesional para agentes químicos en España 2024                                                                                                                                                                                                                                                                                |
| FRA | France         | Valeurs limites d'exposition professionnelle aux agents chimiques en FranceDécret n° 2021-1849 du 28 décembre 2021                                                                                                                                                                                                                                    |
| GRC | Ελλάδα         | Π.Δ. 26/2020 (ΦΕΚ 50/Α` 6.3.2020) Εναρμόνιση της ελληνικής νομοθεσίας προς τις διατάξεις των οδηγιών 2017/2398/ΕΕ, 2019/130/ΕΕ και 2019/983/ΕΕ «για την τροποποίηση της οδηγίας 2004/37/ΕΚ "σχετικά με την προστασία των εργαζομένων από τους κινδύνους που συνδέονται με την έκθεση σε καρκινογόνους ή μεταλλαξιγόνους παράγοντες κατά την εργασία"» |
| HUN | Magyarország   | Az innovációért és technológiáért felelős miniszter 5/2020. (II. 6.) ITM rendelete a kémiai kóroki tényezők hatásának kitett munkavállalók egészségének és biztonságának védelméről                                                                                                                                                                   |
| ITA | Italia         | Decreto Legislativo 9 Aprile 2008, n.81                                                                                                                                                                                                                                                                                                               |
| PRT | Portugal       | Decreto-Lei n.º 102/2024, de 4 de dezembro. Sumário: Transpõe para a ordem jurídica interna a Diretiva (UE) 2022/431, relativa à proteção dos trabalhadores contra riscos ligados à exposição a agentes cancerígenos ou mutagénicos e procede à quarta alteração                                                                                      |
| POL | Polska         | ROZPORZĄDZENIE MINISTRA RODZINY, PRACY I POLITYKI SPOŁECZNEJ z dnia 24 czerwca 2024 r. zmieniające rozporządzenie w sprawie najwyższych dopuszczalnych stężeń i natężeń czynników szkodliwych dla zdrowia w środowisku pracy                                                                                                                          |
| ROU | România        | HOTĂRÂRE nr. 179 din 28 februarie 2024 pentru modificarea și completarea Hotărârii Guvernului nr. 1.093/2006 privind stabilirea cerințelor minime de securitate și sănătate pentru protecția lucrătorilor împotriva riscurilor legate de expunerea la agenți ca                                                                                       |
| GBR | United Kingdom | EH40/2005 Workplace exposure limits (Fourth Edition 2020)                                                                                                                                                                                                                                                                                             |
| EU  | OEL EU         | Directive (EU) 2022/431; Directive (EU) 2019/1831; Directive (EU) 2019/130; Directive (EU) 2019/983; Directive (EU) 2017/2398; Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC; Directive 98/24/EC; Directive 91/322/EEC.                                                            |
|     | ACGIH          | ACGIH 2025                                                                                                                                                                                                                                                                                                                                            |

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

### ETHYLBENZENE

#### Threshold Limit Value

| Type      | Country | TWA/8h |     | STEL/15min |     | Remarks / Observations |
|-----------|---------|--------|-----|------------|-----|------------------------|
|           |         | mg/m3  | ppm | mg/m3      | ppm |                        |
| TLV       | BGR     | 435    |     | 545        |     | SKIN                   |
| AGW       | DEU     | 88     | 20  | 176        | 40  | SKIN                   |
| MAK       | DEU     | 88     | 20  | 176        | 40  | SKIN                   |
| VLA       | ESP     | 441    | 100 | 884        | 200 | SKIN                   |
| VLEP      | FRA     | 88,4   | 20  | 442        | 100 | SKIN                   |
| TLV       | GRC     | 435    | 100 | 545        | 125 |                        |
| AK        | HUN     | 442    |     | 884        |     | SKIN                   |
| VLEP      | ITA     | 442    | 100 | 884        | 200 | SKIN                   |
| VLE       | PRT     | 442    | 100 | 884        | 200 | SKIN                   |
| NDS/NDSch | POL     | 200    |     | 400        |     | SKIN                   |
| TLV       | ROU     | 442    | 100 | 884        | 200 | SKIN                   |
| WEL       | GBR     | 441    | 100 | 552        | 125 | SKIN                   |
| OEL       | EU      | 442    | 100 | 884        | 200 | SKIN                   |
| ACGIH     |         | 87     | 20  |            |     |                        |

### XYLENE

#### Threshold Limit Value

| Type      | Country | TWA/8h |     | STEL/15min |     | Remarks / Observations |
|-----------|---------|--------|-----|------------|-----|------------------------|
|           |         | mg/m3  | ppm | mg/m3      | ppm |                        |
| TLV       | BGR     | 221    | 50  | 442        | 100 | SKIN                   |
| AGW       | DEU     | 440    | 100 | 880        | 200 | SKIN                   |
| MAK       | DEU     | 440    | 100 | 880        | 200 | SKIN                   |
| VLA       | ESP     | 221    | 50  | 442        | 100 | SKIN                   |
| VLEP      | FRA     | 221    | 50  | 442        | 100 | SKIN                   |
| TLV       | GRC     | 435    | 100 | 650        | 150 |                        |
| AK        | HUN     | 221    |     | 442        |     | SKIN                   |
| VLEP      | ITA     | 221    | 50  | 442        | 100 | SKIN                   |
| VLE       | PRT     | 221    | 50  | 442        | 100 | SKIN                   |
| NDS/NDSch | POL     | 100    |     | 200        |     | SKIN                   |
| TLV       | ROU     | 221    | 50  | 442        | 100 | SKIN                   |
| WEL       | GBR     | 220    | 50  | 441        | 100 | SKIN                   |
| OEL       | EU      | 221    | 50  | 442        | 100 | SKIN                   |
| ACGIH     |         |        | 20  |            |     |                        |

### ISOPHORONE DI-ISOCYANATE

#### Threshold Limit Value

| Type      | Country | TWA/8h |       | STEL/15min |           | Remarks / Observations |
|-----------|---------|--------|-------|------------|-----------|------------------------|
|           |         | mg/m3  | ppm   | mg/m3      | ppm       |                        |
| TLV       | BGR     | 0,1    |       |            |           |                        |
| AGW       | DEU     | 0,046  | 0,005 | 0,046      | 0,005     | 11,12                  |
| MAK       | DEU     | 0,046  | 0,005 | 0,046 (C)  | 0,005 (C) | C = 0,092 mg/m3        |
| VLA       | ESP     | 0,046  | 0,005 |            |           |                        |
| VLEP      | FRA     | 0,09   | 0,01  | 0,18       | 0,02      |                        |
| TLV       | GRC     | 0,09   |       | 0,18       |           |                        |
| NDS/NDSch | POL     | 0,04   |       |            |           |                        |
| ACGIH     |         | 0,045  | 0,005 |            |           |                        |

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

### 1,6-hexanediy-bis(2-(2-(1-ethylpentyl)-3-oxazolidinyl)ethyl)carbamate

#### Predicted no-effect concentration - PNEC

|                                                     |        |       |
|-----------------------------------------------------|--------|-------|
| Normal value in fresh water                         | 0,043  | mg/l  |
| Normal value in marine water                        | 0,0043 | mg/l  |
| Normal value for fresh water sediment               | 164,5  | mg/kg |
| Normal value for marine water sediment              | 16,5   | mg/kg |
| Normal value for marine water, intermittent release | 0,43   | mg/l  |
| Normal value of STP microorganisms                  | 35     | mg/l  |
| Normal value for the terrestrial compartment        | 32,9   | mg/kg |
| Normal value for the atmosphere                     | NPI    |       |

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

| Route of exposure | Effects on consumers |                | Chronic local | Chronic systemic | Effects on workers |                |                |
|-------------------|----------------------|----------------|---------------|------------------|--------------------|----------------|----------------|
|                   | Acute local          | Acute systemic |               |                  | Acute local        | Acute systemic | Chronic local  |
| Oral              |                      | NPI            |               | 0,33 mg/kg bw/d  |                    |                |                |
| Inhalation        | NPI                  | NPI            | NPI           | 0,58 mg/m3       | NPI                | NPI            | 3,3 mg/m3      |
| Skin              | MED                  | NPI            | MED           | 3,3 mg/kg bw/d   | MED                | NPI            | 9,3 mg/kg bw/d |

### 2-METHOXYPROPYL ACETATE

#### Threshold Limit Value

| Type      | Country | TWA/8h |     | STEL/15min |     | Remarks / Observations |
|-----------|---------|--------|-----|------------|-----|------------------------|
|           |         | mg/m3  | ppm | mg/m3      | ppm |                        |
| AGW       | DEU     | 28     | 5   | 56         | 10  | SKIN                   |
| MAK       | DEU     | 27     | 5   | 54         | 10  | SKIN Hinweis           |
| VLA       | ESP     | 28     | 5   | 220        | 40  |                        |
| NDS/NDSch | POL     | 100    |     | 200        |     |                        |

### 2-METHOXY-1-METHYLETHYL ACETATE

#### Threshold Limit Value

| Type      | Country | TWA/8h |     | STEL/15min |     | Remarks / Observations |
|-----------|---------|--------|-----|------------|-----|------------------------|
|           |         | mg/m3  | ppm | mg/m3      | ppm |                        |
| TLV       | BGR     | 275    | 50  | 550        | 100 | SKIN                   |
| AGW       | DEU     | 270    | 50  | 270        | 50  |                        |
| MAK       | DEU     | 270    | 50  | 270        | 50  |                        |
| VLA       | ESP     | 275    | 50  | 550        | 100 | SKIN                   |
| VLEP      | FRA     | 275    | 50  | 550        | 100 | SKIN                   |
| TLV       | GRC     | 275    | 50  | 550        | 100 |                        |
| AK        | HUN     | 275    | 50  | 550        | 100 |                        |
| VLEP      | ITA     | 275    | 50  | 550        | 100 | SKIN                   |
| VLE       | PRT     | 275    | 50  | 550        | 100 | SKIN                   |
| NDS/NDSch | POL     | 260    |     | 520        |     | SKIN                   |
| TLV       | ROU     | 275    | 50  | 550        | 100 | SKIN                   |
| WEL       | GBR     | 274    | 50  | 548        | 100 | SKIN                   |
| OEL       | EU      | 275    | 50  | 550        | 100 | SKIN                   |

Legend:

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

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified ; LOW = low hazard ; MED = medium hazard ; HIGH = high hazard.

## 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.

Exposure levels must be kept as low as possible to avoid significant build-up in the organism. Manage personal protective equipment so as to guarantee maximum protection (e.g. reduction in replacement times).

#### HAND PROTECTION

Protect hands with category III work gloves.

The following should be considered when choosing work glove material (see standard EN 374): compatibility, degradation, permeability time.

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.



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

### 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.

Consider the appropriateness of providing antistatic clothing in the case of working environments in which there is a risk of explosion.

### EYE PROTECTION

Wear airtight protective goggles (see standard EN ISO 16321).

### RESPIRATORY PROTECTION

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. 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).

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                             | liquid                  |                    |
| Colour                                 | not available           |                    |
| Odour                                  | characteristic          |                    |
| Melting point / freezing point         | not available           |                    |
| Initial boiling point                  | 141 °C                  |                    |
| Flammability                           | not available           |                    |
| Lower explosive limit                  | not available           |                    |
| Upper explosive limit                  | not available           |                    |
| Flash point                            | 36 °C                   |                    |
| Auto-ignition temperature              | 285 °C                  |                    |
| Decomposition temperature              | not available           |                    |
| pH                                     | 6                       |                    |
| Kinematic viscosity                    | not available           |                    |
| Solubility                             | not available           |                    |
| Partition coefficient: n-octanol/water | not available           |                    |
| Vapour pressure                        | 658 Pa                  | Temperature: 20 °C |
| Density and/or relative density        | 0,962 g/cm <sup>3</sup> |                    |
| 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

|                            |                  |         |
|----------------------------|------------------|---------|
| VOC (Directive 2010/75/EU) | 57,50 % - 553,15 | g/litre |
| VOC (volatile carbon)      | 46,18 % - 444,30 | 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.

#### 2-METHOXY-1-METHYLETHYL ACETATE

Stable in normal conditions of use and storage.



**SECTION 10. Stability and reactivity** ... / >>

With the air it may slowly develop peroxides that explode with an increase in temperature.

**10.2. Chemical stability**

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

**10.3. Possibility of hazardous reactions**

The vapours may also form explosive mixtures with the air.

**ETHYLBENZENE**

Reacts violently with: strong oxidants. Attacks various types of plastic materials. May form explosive mixtures with: air.

**XYLENE**

Stable in normal conditions of use and storage. Reacts violently with: strong oxidants, strong acids, nitric acid, perchlorates. May form explosive mixtures with: air.

**2-METHOXY-1-METHYLETHYL ACETATE**

May react violently with: oxidising substances, strong acids, alkaline metals.

**10.4. Conditions to avoid**

Avoid overheating. Avoid bunching of electrostatic charges. Avoid all sources of ignition.

**10.5. Incompatible materials****2-METHOXY-1-METHYLETHYL ACETATE**

Incompatible with: oxidising substances, strong acids, alkaline metals.

**10.6. Hazardous decomposition products**

In the event of thermal decomposition or fire, gases and vapours that are potentially dangerous to health may be released.

**ETHYLBENZENE**

May develop: methane, styrene, hydrogen, ethane.

**SECTION 11. Toxicological information****11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**Metabolism, toxicokinetics, mechanism of action and other information**2-METHOXY-1-METHYLETHYL ACETATE**

The main route of entry is the skin, whereas the respiratory route is less important due to the low vapour pressure of the product.

Information on likely routes of exposure**XYLENE**

WORKERS: inhalation; contact with the skin.

POPULATION: ingestion of contaminated food or water; inhalation of ambient air.

**2-METHOXY-1-METHYLETHYL ACETATE**

WORKERS: inhalation; contact with the skin.

**ETHYLBENZENE**

WORKERS: inhalation; contact with the skin.

POPULATION: ingestion of contaminated food or water; contact with the skin of products containing the substance.

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

Toxic effect on the central nervous system (encephalopathy); irritating for the skin, conjunctiva, cornea and respiratory apparatus.

**2-METHOXY-1-METHYLETHYL ACETATE**

Above 100 ppm causes irritation of the eye, nose and oropharynx mucous membranes. At 1000 ppm, disturbance of equilibrium and severe eye irritation can be noticed. Clinical and biological examinations carried out on exposed volunteers revealed no anomalies.

Acetate produces greater skin and eye irritation with direct contact. No chronic effects on humans have been reported (INCR, 2010).

**ETHYLBENZENE**

As the counterparts of benzene, may have an acute effect on the central nervous system, with depression, narcosis, often preceded by dizziness and associated with headache (Ispesl). Is irritating for skin, conjunctiva and respiratory tract.

Interactive effects

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

### XYLENE

Intake of alcohol interferes with the metabolism of the substance, inhibiting it. Ethanol consumption (0.8 g/kg) before a 4-hour exposure to xylene vapours (145 and 280 ppm) causes a 50% reduction in the excretion of methyl hippuric acid, whereas the concentration of xylenes in the blood increases approx. 1.5-2 times. At the same time there is an increase in the secondary side effects of the ethanol. The metabolism of the xylenes is increased by phenobarbital and 3-methyl-colantrene type enzyme inducers. Aspirin and xylenes mutually inhibit their conjugation with the glycine, which results in a decrease in urinary excretion of methyl hippuric acid. Other industrial products can interfere with the metabolism of xylenes.

### ACUTE TOXICITY

|                                                    |                                           |
|----------------------------------------------------|-------------------------------------------|
| ATE (Inhalation - mists / powders) of the mixture: | 4,00 mg/l                                 |
| ATE (Inhalation - vapours) of the mixture:         | > 20 mg/l                                 |
| ATE (Oral) of the mixture:                         | Not classified (no significant component) |
| ATE (Dermal) of the mixture:                       | >2000 mg/kg                               |

### XYLENE

|                            |                                                                                                                                           |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| LD50 (Dermal):             | 4350 mg/kg Rabbit                                                                                                                         |
| ATE (Dermal):              | 1100 mg/kg estimate from table 3.1.2 of Annex I of the CLP<br>(figure used for calculation of the acute toxicity estimate of the mixture) |
| LD50 (Oral):               | 3523 mg/kg Rat                                                                                                                            |
| LC50 (Inhalation vapours): | 26 mg/l/4h Rat                                                                                                                            |
| ATE (Inhalation vapours):  | 11 mg/l estimate from table 3.1.2 of Annex I of the CLP<br>(figure used for calculation of the acute toxicity estimate of the mixture)    |

### 2-METHOXY-1-METHYLETHYL ACETATE

|                |                  |
|----------------|------------------|
| LD50 (Dermal): | > 5000 mg/kg Rat |
| LD50 (Oral):   | 8530 mg/kg Rat   |

### ETHYLBENZENE

|                            |                    |
|----------------------------|--------------------|
| LD50 (Dermal):             | 15354 mg/kg Rabbit |
| LD50 (Oral):               | 3500 mg/kg Rat     |
| LC50 (Inhalation vapours): | 17,2 mg/l/4h Rat   |

### 1,6-hexanediy-bis(2-(2-(1-ethylpentyl)-3-oxazolidinyl)ethyl)carbamate

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

### ISOPHORONE DI-ISOCYANATE

|                                  |                  |
|----------------------------------|------------------|
| LC50 (Inhalation mists/powders): | 0,04 mg/l/4h Rat |
|----------------------------------|------------------|

### SKIN CORROSION / IRRITATION

Causes skin irritation

### SERIOUS EYE DAMAGE / IRRITATION

Does not meet the classification criteria for this hazard class

### RESPIRATORY OR SKIN SENSITISATION

Sensitising for the skin  
Sensitising for the respiratory system

### GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

### CARCINOGENICITY

Does not meet the classification criteria for this hazard class

### XYLENE

Classified in Group 3 (not classifiable as a human carcinogen) by the International Agency for Research on Cancer (IARC).  
The US Environmental Protection Agency (EPA) affirms that "the data is inadequate for an assessment of the carcinogenic potential".

### ETHYLBENZENE

Classified in Group 2B (possible human carcinogen) by the International Agency for Research on Cancer (IARC) - (IARC, 2000).  
Classified in Group D (not classifiable as a human carcinogen) by the US Environmental Protection Agency (EPA) - (US EPA file on-line 2014).

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

### REPRODUCTIVE TOXICITY

May damage the unborn child

### STOT - SINGLE EXPOSURE

May cause respiratory irritation

### STOT - REPEATED EXPOSURE

May cause damage to organs

### ASPIRATION HAZARD

Toxic for aspiration

### 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.

1,6-hexanediyl-bis(2-(2-(1-ethylpentyl)-3-oxazolidinyl)ethyl)carbamate

Repeated dose toxicity:

Oral:

NOAEL: 200 mg/kg bw/day (Rat)

## SECTION 12. Ecological information

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

### 12.1. Toxicity

1,6-hexanediyl-bis(2-(2-(1-ethylpentyl)-3-oxazolidinyl)ethyl)carbamate

LC50 - for Fish 199,2 mg/l/96h

EC50 - for Crustacea 193 mg/l/48h

EC50 - for Algae / Aquatic Plants 43 mg/l/72h

Chronic NOEC for Algae / Aquatic Plants 12,5 mg/l (72h)

### 12.2. Persistence and degradability

XYLENE

Solubility in water 100 - 1000 mg/l

Rapidly degradable

2-METHOXY-1-METHYLETHYL ACETATE

Solubility in water > 10000 mg/l

Rapidly degradable

ETHYLBENZENE

Solubility in water 1000 - 10000 mg/l

Rapidly degradable

1,6-hexanediyl-bis(2-(2-(1-ethylpentyl)-3-oxazolidinyl)ethyl)carbamate

Inherently degradable 100%

2-METHOXYPROPYL ACETATE

Solubility in water 400000 mg/l

ISOPHORONE DI-ISOCYANATE

NOT rapidly degradable

### 12.3. Bioaccumulative potential

XYLENE

Partition coefficient: n-octanol/water 3,12

BCF 25,9

**SECTION 12. Ecological information ... / >>**

2-METHOXY-1-METHYLETHYL ACETATE  
Partition coefficient: n-octanol/water 1,2

ETHYLBENZENE  
Partition coefficient: n-octanol/water 3,6

ISOPHORONE DI-ISOCYANATE  
Partition coefficient: n-octanol/water 0,99

**12.4. Mobility in soil**

XYLENE  
Partition coefficient: soil/water 2,73

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

On the basis of available data, the product does not contain any PBT or vPvB in percentage  $\geq$  than 0,1%.

**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.

Waste transportation may be subject to ADR restrictions.

The management of waste arising from the use or dispersal of this product must be organised in accordance with occupational safety regulations. See section 8 for possible need for PPE.

CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

**SECTION 14. Transport information****14.1. UN number or ID number**

ADR / RID, IMDG, IATA: UN 1263

**14.2. UN proper shipping name**

ADR / RID: PAINT  
IMDG: PAINT  
IATA: PAINT

## SECTION 14. Transport information ... / >>

### 14.3. Transport hazard class(es)

ADR / RID: Class: 3 Label: 3

IMDG: Class: 3 Label: 3

IATA: Class: 3 Label: 3



### 14.4. Packing group

ADR / RID, IMDG, IATA: III

### 14.5. Environmental hazards

ADR / RID: NO  
IMDG: not marine pollutant  
IATA: NO

### 14.6. Special precautions for user

|            |                                  |                          |                                |
|------------|----------------------------------|--------------------------|--------------------------------|
| ADR / RID: | HIN - Kemler: 30                 | Limited Quantities: 5 lt | Tunnel restriction code: (D/E) |
|            | Special provision: 163, 367, 650 |                          |                                |
| IMDG:      | EMS: F-E, S-E                    | Limited Quantities: 5 lt |                                |
| IATA:      | Cargo:                           | Maximum quantity: 220 L  | Packaging instructions: 366    |
|            | Passengers:                      | Maximum quantity: 60 L   | Packaging instructions: 355    |
|            | Special provision:               | A3, A72, A192            |                                |

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

Information not relevant

## SECTION 15. Regulatory information

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

Seveso Category - Directive 2012/18/EU: P5c

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 | 30 | 2-METHOXYPROPYL ACETATE |
| Point | 74 | DIISOCYANATES           |

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

Substances in Candidate List (Art. 59 REACH)

On the basis of available data, the product does not contain any SVHC in percentage  $\geq$  than 0,1%.

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

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

### 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.

### 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:

|                          |                                                                            |
|--------------------------|----------------------------------------------------------------------------|
| <b>Flam. Liq. 2</b>      | Flammable liquid, category 2                                               |
| <b>Flam. Liq. 3</b>      | Flammable liquid, category 3                                               |
| <b>Repr. 1B</b>          | Reproductive toxicity, category 1B                                         |
| <b>Acute Tox. 1</b>      | Acute toxicity, category 1                                                 |
| <b>Acute Tox. 4</b>      | Acute toxicity, category 4                                                 |
| <b>Asp. Tox. 1</b>       | Aspiration hazard, category 1                                              |
| <b>STOT RE 2</b>         | Specific target organ toxicity - repeated exposure, category 2             |
| <b>Eye Irrit. 2</b>      | Eye irritation, category 2                                                 |
| <b>Skin Irrit. 2</b>     | Skin irritation, category 2                                                |
| <b>STOT SE 3</b>         | Specific target organ toxicity - single exposure, category 3               |
| <b>Resp. Sens. 1</b>     | Respiratory sensitization, category 1                                      |
| <b>Skin Sens. 1</b>      | Skin sensitization, category 1                                             |
| <b>Aquatic Acute 1</b>   | Hazardous to the aquatic environment, acute toxicity, category 1           |
| <b>Aquatic Chronic 1</b> | Hazardous to the aquatic environment, chronic toxicity, category 1         |
| <b>Aquatic Chronic 2</b> | Hazardous to the aquatic environment, chronic toxicity, category 2         |
| <b>Aquatic Chronic 3</b> | Hazardous to the aquatic environment, chronic toxicity, category 3         |
| <b>H225</b>              | Highly flammable liquid and vapour.                                        |
| <b>H226</b>              | Flammable liquid and vapour.                                               |
| <b>H360D</b>             | May damage the unborn child.                                               |
| <b>H330</b>              | Fatal if inhaled.                                                          |
| <b>H312</b>              | Harmful in contact with skin.                                              |
| <b>H332</b>              | Harmful if inhaled.                                                        |
| <b>H304</b>              | May be fatal if swallowed and enters airways.                              |
| <b>H373</b>              | May cause damage to organs through prolonged or repeated exposure.         |
| <b>H319</b>              | Causes serious eye irritation.                                             |
| <b>H315</b>              | Causes skin irritation.                                                    |
| <b>H335</b>              | May cause respiratory irritation.                                          |
| <b>H334</b>              | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| <b>H317</b>              | May cause an allergic skin reaction.                                       |
| <b>H400</b>              | Very toxic to aquatic life.                                                |
| <b>H410</b>              | Very toxic to aquatic life with long lasting effects.                      |
| <b>H411</b>              | Toxic to aquatic life with long lasting effects.                           |
| <b>H412</b>              | Harmful to aquatic life with long lasting effects.                         |
| <b>EUH204</b>            | Contains isocyanates. May produce an allergic reaction.                    |

### 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

**SECTION 16. Other information ... / >>**

- PBT: Persistent, bioaccumulative and toxic
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PMT: Persistent, mobile and toxic
- 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
- vPvM: Very persistent and very mobile
- 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)
22. Delegated Regulation (UE) 2022/692 (XVIII Atp. CLP)
23. Delegated Regulation (UE) 2023/707
24. Delegated Regulation (UE) 2023/1434 (XIX Atp. CLP)
25. Delegated Regulation (UE) 2023/1435 (XX Atp. CLP)
26. Delegated Regulation (UE) 2024/197 (XXI Atp. CLP)
27. Delegated Regulation (UE) 2024/2564 (XXII 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 16. Other information ... / >>

Section 12.

Changes to previous review:

The following sections were modified:

01 / 02 / 03 / 05 / 06 / 07 / 08 / 09 / 10 / 11 / 12 / 13 / 14 / 15 / 16.