

## Safety Data Sheet

### ULTRACOAT HT 2K 30-60/ B

Safety Data Sheet dated: 07/02/2023 - version 4



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

### 1.1. Product identifier

Mixture identification:

Trade name: ULTRACOAT HT 2K 30-60/ B

Trade code: 9074408

UFI: G2A0-508Y-G00P-216S

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

Recommended use: Epoxy paint

Uses advised against: Data not available.

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

Company: MAPEI S.p.A. - Via Cafiero, 22 - 20158 Milano

Tel. +(39)02376731 (office hours) - Fax: +39-02-37673.214 - www.mapei.it

Responsible: sicurezza@mapei.it

### 1.4. Emergency telephone number

Centro antiveleni, Azienda ospedaliera "Antonio Cardarelli", III Servizio di anestesia e rianimazione, via Antonio Cardarelli 9, Napoli - Tel. 081 5453333

Centro antiveleni, Azienda ospedaliera universitaria Careggi, U.O. Tossicologia medica, via Largo Brambilla 3, Firenze - Tel. 055 7947819

Centro antiveleni, Centro nazionale d'informazione tossicologica, IRCCS Fondazione Salvatore Maugeri Clinica del lavoro e della riabilitazione, via Salvatore Maugeri 10, Pavia - Tel. 0382 24444

Centro antiveleni, Azienda ospedaliera Niguarda Ca' Granda, piazza Ospedale Maggiore 3, Milano - Tel. 02 66101029

Centro antiveleni, Azienda ospedaliera "Papa Giovanni XXIII", Tossicologia clinica, Dipartimento di farmacia clinica e farmacologia, piazza OMS 1, Bergamo - Tel. 800 883300

Centro antiveleni Policlinico "Umberto I", PRGM tossicologia d'urgenza, viale del Policlinico 155, Roma - Tel. 06 49978000

Centro antiveleni del Policlinico "Agostino Gemelli", Servizio di tossicologia clinica, largo Agostino Gemelli 8, Roma - Tel. 06 3054343

Centro antiveleni, Azienda ospedaliera universitaria Riuniti, viale Luigi Pinto 1, Foggia - Tel. 800 183459

Centro antiveleni, Ospedale pediatrico Bambino Gesù, Dipartimento emergenza e accettazione DEA, piazza Sant'Onofrio 4, Roma - Tel. 06 68593726

Centro antiveleni dell'Azienda ospedaliera universitaria integrata (AOUI) di Verona sede di Borgo Trento, piazzale Aristide Stefani, 1 - 37126 Verona - Tel. 800 011858

## SECTION 2: Hazards identification



### 2.1. Classification of the substance or mixture

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

|               |                                      |
|---------------|--------------------------------------|
| Acute Tox. 4  | Harmful if inhaled.                  |
| Skin Irrit. 2 | Causes skin irritation.              |
| Eye Dam. 1    | Causes serious eye damage.           |
| Skin Sens. 1B | May cause an allergic skin reaction. |
| STOT SE 3     | May cause respiratory irritation.    |

2 The concentration of isocyanate stated is the percentage by weight of the free monomer calculated with reference to the total weight of the mixture.

Adverse physicochemical, human health and environmental effects:

No other hazards

### 2.2. Label elements

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

#### Pictograms and Signal Words



Danger

#### Hazard statements

|      |                                      |
|------|--------------------------------------|
| H315 | Causes skin irritation.              |
| H317 | May cause an allergic skin reaction. |

H318 Causes serious eye damage.  
H332 Harmful if inhaled.  
H335 May cause respiratory irritation.

**Precautionary statements**

P261 Avoid breathing mist/vapours/spray.  
P264 Wash hands thoroughly after handling.  
P280 Wear protective gloves/clothing and eye/face protection.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 Immediately call a POISON CENTER.  
P312 Call a POISON CENTER if you feel unwell.  
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

**Special Provisions:**

EUH208 Contains hexamethylene-di-isocyanate. May produce an allergic reaction.  
EUH208 Contains 3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate. May produce an allergic reaction.  
EUH204 Contains isocyanates. May produce an allergic reaction.

**Contains**

Hexamethylene diisocyanate, oligomers  
3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate, oligomers  
cyclohexyldimethylamine  
Phosphoric acid, (ethoxylated tridecyl alcohol) esters

**Special provisions according to Annex XVII of REACH and subsequent amendments:**

None.

**2.3. Other hazards**

No PBT, vPvB or endocrine disruptor substances present in concentration >= 0.1%

Other Hazards: No other hazards

**SECTION 3: Composition/information on ingredients**

**3.1. Substances**

Not Relevant

**3.2. Mixtures**

Mixture identification: ULTRACOAT HT 2K 30-60/ B

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

| Qty             | Name   | Ident. Numb.                                       | Classification  | Registration Number   |
|-----------------|--|--|---|-----------------------|
| ≥50 - <75 %     | Hexamethylene diisocyanate, oligomers                              | CAS:28182-81-2<br>EC:500-060-2                     | Acute Tox. 4, H332; STOT SE 3, H335; Skin Sens. 1, H317   | 01-2119970543-34-XXXX |
| ≥25 - <50 %     | 3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate, oligomers | CAS:53880-05-0<br>EC:500-125-5                     | Skin Sens. 1B, H317; STOT SE 3, H335  | 01-2119488734-24-0002 |
| ≥5 - <10 %      | Phosphoric acid, (ethoxylated tridecyl alcohol) esters             | CAS:9046-01-9<br>EC:618-558-4                      | Skin Irrit. 2, H315; Aquatic Chronic 3, H412; Eye Dam. 1, H318  |                       |
| ≥1 - <2.5 %     | cyclohexyldimethylamine  | CAS:98-94-2<br>EC:202-715-5                        | Flam. Liq. 3, H226; Acute Tox. 3, H331; Acute Tox. 3, H301; Skin Corr. 1B, H314; Aquatic Chronic 3, H412                            | 01-2119533030-60-xxxx |
| ≥0.25 - <0.49 % | hexamethylene-di-isocyanate  | CAS:822-06-0<br>EC:212-485-8<br>Index:615-011-00-1 | Acute Tox. 4, H302 Eye Irrit. 2, H319 STOT SE 3, H335 Skin Irrit. 2, H315 Resp. Sens. 1, H334 Skin Sens. 1, H317 Acute Tox. 1, H330 | 01-2119457571-37-XXXX |

Specific Concentration Limits:

0,5% ≤ C < 100%: Resp. Sens. 1  
H334  
0,5% ≤ C < 100%: Skin Sens. 1  
H317

≥0.25 - 3-isocyanatomethyl-3,5,5- CAS:4098-71-9 Eye Irrit. 2, H319 STOT SE 3, 01-2119490408-31-XXXX  
<0.49 % trimethylcyclohexyl isocyanate EC:223-861-6 H335 Skin Irrit. 2, H315 Aquatic  
Index:615-008- Chronic 2, H411 Acute Tox. 1,  
00-5 H330 Resp. Sens. 1, H334 Skin  
Sens. 1, H317

Specific Concentration Limits:  
C ≥ 0,5%: Skin Sens. 1 H317  
C ≥ 0,5%: Resp. Sens. 1 H334

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## SECTION 4: First aid measures

### 4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap.

OBTAIN IMMEDIATE MEDICAL ATTENTION.

Wash thoroughly the body (shower or bath).

Remove contaminated clothing immediately and dispose of safely.

After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

Protect uninjured eye.

In case of Ingestion:

Do not induce vomiting, get medical attention showing the SDS and the hazard label.

In case of Inhalation:

If breathing is irregular or stopped, administer artificial respiration.

In case of inhalation, consult a doctor immediately and show him packing or label.

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

Eye irritation

Eye damages

Skin Irritation

Erythema

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment:

(see paragraph 4.1)

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## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO<sub>2</sub>).

Extinguishing media which must not be used for safety reasons:

None in particular.

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

Do not inhale explosion and combustion gases.

### 5.3. Advice for firefighters

Use suitable breathing apparatus.

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## SECTION 6: Accidental release measures

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

Wear personal protection equipment.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Provide adequate ventilation.

Use appropriate respiratory protection.

## 6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.  
Limit leakages with earth or sand.

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

Suitable material for taking up: absorbing material, organic, sand  
Retain contaminated washing water and dispose it.

## 6.4. Reference to other sections

See also section 8 and 13

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## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.  
Use localized ventilation system.  
Don't use empty container before they have been cleaned.  
Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.  
Contaminated clothing should be changed before entering eating areas.  
Do not eat or drink while working.  
See also section 8 for recommended protective equipment.

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

Keep away from food, drink and feed.

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Adequately ventilated premises.

### 7.3. Specific end use(s)

Recommendation(s)

None in particular

Industrial sector specific solutions:

None in particular

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## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Community Occupational Exposure Limits (OEL)

|  | OEL Type | Country        | Occupational Exposure Limit  |
|--|----------|----------------|--|
| cyclohexyldimethylamine<br>CAS: 98-94-2      | National | CZECH REPUBLIC | Long Term: 5 mg/m <sup>3</sup>   |
|  | National | CZECH REPUBLIC | Ceiling - Short Term: 10 mg/m <sup>3</sup>   |
| hexamethylene-di-isocyanate<br>CAS: 822-06-0 | ACGIH    |                | Long Term: 0,005 ppm<br>URT irr, resp sens   |
|  | National | SWEDEN         | Ceiling - Long Term: 0,02 mg/m <sup>3</sup> - 0,002 ppm; Short Term: 0,03 mg/m <sup>3</sup> - 0,005 ppm<br>SWEDEN, Ceiling limit value |
|  | National | NORWAY         | Long Term: 0,035 mg/m <sup>3</sup> - 0,005 ppm<br>NORWAY, A 4  |
|  | National | NORWAY         | Long Term: 0,035 mg/m <sup>3</sup> - 0,005 ppm; Short Term: 0,07 mg/m <sup>3</sup> - 0,01 ppm  |
|  | DFG      | GERMANY        | Ceiling - Short Term: 0,035 mg/m <sup>3</sup> - 0,005 ppm  |
|  | ACGIH    |                | Long Term: 0,005 ppm<br>respiratory sensitization; upper respiratory tract irritation  |
|  | National | SWEDEN         | Long Term: 0,02 mg/m <sup>3</sup> - 0,002 ppm  |
|  | National | FRANCE         | Long Term: 0,075 mg/m <sup>3</sup> - 0,01 ppm; Short Term: 0,15 mg/m <sup>3</sup> - 0,02 ppm   |
|  | National | SPAIN          | Long Term: 0,035 mg/m <sup>3</sup> - 0,005 ppm   |
|  | National | GREECE         | Long Term: 0,075 mg/m <sup>3</sup> - 0,01 ppm; Short Term: 0,15 mg/m <sup>3</sup> - 0,02 ppm   |
|  | National | DENMARK        | Long Term: 0,035 mg/m <sup>3</sup> - 0,005 ppm   |
|  | National | GERMANY        | Long Term: 0,035 mg/m <sup>3</sup> - 0,005 ppm   |
|  | National | PORTUGAL       | Long Term: 0,005 ppm   |
|  | National | NORWAY         | Long Term: 0,035 mg/m <sup>3</sup> - 0,005 ppm; Short Term: 0,01 ppm   |

|  |   |
|--|---|
| National BELGIUM   | Long Term: 0,034 mg/m3 - 0,005 ppm                                      |
| NDS POLAND   | Long Term: 0,04 mg/m3   |
| NDSCh POLAND   | Short Term: 0,08 mg/m3  |
| National CZECH<br>REPUBLIC   | Long Term: 0,035 mg/m3  |
| National HUNGARY   | Long Term: 0,035 mg/m3; Short Term: 0,035 mg/m3                         |
| Malaysi<br>a OEL   | Long Term: 0,034 mg/m3 - 0,005 ppm                                      |
| National ESTONIA   | Long Term: 0,03 mg/m3 - 0,005 ppm; Short Term: 0,07 mg/m3 - 0,01 ppm    |
| National LATVIA  | Long Term: 0,05 mg/m3   |
| National CZECH<br>REPUBLIC   | Ceiling - Short Term: 0,07 mg/m3  |
| National SLOVAKIA  | Long Term: 0,035 mg/m3 - 0,005 ppm                                      |
| National SLOVENIA  | Long Term: 0,035 mg/m3 - 0,005 ppm; Short Term: 0,035 mg/m3 - 0,005 ppm |
| National BULGARIA  | Long Term: 0,1 mg/m3  |
| National ROMANIA   | Long Term: 0,05 mg/m3 - 0,007 ppm; Short Term: 1 mg/m3 - 0,14 ppm       |
| National LITHUANIA   | Long Term: 0,03 mg/m3 - 0,005 ppm                                       |
| National LITHUANIA   | Ceiling - Short Term: 0,07 mg/m3 - 0,01 ppm                             |
| 3-isocyanatomethyl-3,5,5-<br>trimethylcyclohexyl<br>isocyanate<br>CAS: 4098-71-9 | DFG GERMANY<br>Ceiling - Short Term: 0,046 mg/m3 - 0,005 ppm            |
| ACGIH  | Long Term: 0,005 ppm<br>respiratory sensitization                       |
| National FRANCE  | Long Term: 0,09 mg/m3 - 0,01 ppm; Short Term: 0,18 mg/m3 - 0,02 ppm     |
| National SPAIN   | Long Term: 0,046 mg/m3 - 0,005 ppm                                      |
| National GERMANY   | Long Term: 0,046 mg/m3 - 0,005 ppm                                      |
| National PORTUGAL  | Long Term: 0,005 ppm  |
| National BELGIUM   | Long Term: 0,046 mg/m3 - 0,005 ppm                                      |
| NDS POLAND   | Long Term: 0,04 mg/m3   |
| National NORWAY  | Long Term: 0,045 mg/m3 - 0,005 ppm; Short Term: 0,01 ppm                |
| National GREECE  | Long Term: 0,09 mg/m3 - 0,01 ppm; Short Term: 0,18 mg/m3 - 0,02 ppm     |
| National SWEDEN  | Long Term: 0,018 mg/m3 - 0,002 ppm                                      |
| National DENMARK   | Long Term: 0,045 mg/m3 - 0,005 ppm                                      |
| Malaysi<br>a OEL   | Long Term: 0,045 mg/m3 - 0,005 ppm                                      |
| National ESTONIA   | Long Term: 0,05 mg/m3 - 0,005 ppm; Short Term: 0,09 mg/m3 - 0,01 ppm    |
| National SLOVENIA  | Long Term: 0,046 mg/m3 - 0,005 ppm; Short Term: 0,046 mg/m3 - 0,005 ppm |
| National BULGARIA  | Long Term: 0,1 mg/m3  |
| National LITHUANIA   | Long Term: 0,05 mg/m3 - 0,005 ppm                                       |
| National LITHUANIA   | Ceiling - Short Term: 0,09 mg/m3 - 0,01 ppm                             |
| National CROATIA   | Long Term: 0,02 mg/m3; Short Term: 0,07 mg/m3                           |
| National UNITED<br>KINGDOM   | Long Term: 0,02 mg/m3; Short Term: 0,07 mg/m3                           |
| CHE<br>D   | SWITZERLAN Short Term: 0,02 mg/m3                                       |
| National FINLAND   | Short Term: 0,035 mg/m3   |

### Biological limit values

hexamethylene-di-  
isocyanate  
CAS: 822-06-0

Biological Indicator: 1,6-Hexamethylenediamine with hydrolysis; Sampling Period: End of turn  
Value: 15 MICROGGCREAT; Medium: Urine  
Remark: Not Specific

### Predicted No Effect Concentration (PNEC) values

Hexamethylene  
diisocyanate, oligomers  
CAS: 28182-81-2

Exposure Route: Fresh Water; PNEC Limit: 0,127 mg/l

Exposure Route: Marine water; PNEC Limit: 0,0127 mg/l  
Exposure Route: Soil; PNEC Limit: 53182 mg/kg  
Exposure Route: Freshwater sediments; PNEC Limit: 266700 mg/kg  
Exposure Route: Marine water sediments; PNEC Limit: 26670 mg/kg  
Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 38,3 mg/l  
Exposure Route: Intermittent release; PNEC Limit: 1,27 mg/l

3-Isocyanatomethyl-3,5,  
5-trimethylcyclohexyl  
isocyanate, oligomers  
Exposure Route: Fresh Water; PNEC Limit: 0,0015 mg/l

CAS: 53880-05-0

Exposure Route: Marine water; PNEC Limit: 0,00015 mg/l  
Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 100 mg/l  
Exposure Route: Fresh Water; PNEC Limit: 0,077 mg/l

hexamethylene-di-  
isocyanate  
CAS: 822-06-0

Exposure Route: Marine water; PNEC Limit: 0,008 mg/l  
Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 8,42 mg/l  
Exposure Route: Freshwater sediments; PNEC Limit: 0,013 mg/kg  
Exposure Route: Marine water; PNEC Limit: 0,001 mg/kg  
Exposure Route: Soil; PNEC Limit: 0,003

### Derived No Effect Level (DNEL) values

Hexamethylene diisocyanate, oligomers  
CAS: 28182-81-2  
Exposure Route: Human Inhalation; Exposure Frequency: Short Term, local effects  
Worker Industry: 1 mg/m<sup>3</sup>

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, local effects  
Worker Industry: 0,5 mg/m<sup>3</sup>

3-Isocyanatomethyl-3,5,  
5-trimethylcyclohexyl  
isocyanate, oligomers  
Exposure Route: Human Inhalation; Exposure Frequency: Short Term, local effects  
Worker Industry: 0,58 mg/m<sup>3</sup>

CAS: 53880-05-0

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, local effects  
Worker Industry: 0,29 mg/m<sup>3</sup>

hexamethylene-di-  
isocyanate  
CAS: 822-06-0  
Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects  
Worker Industry: 0,035 mg/m<sup>3</sup>

Exposure Route: Human Inhalation; Exposure Frequency: Short Term, systemic effects  
Worker Industry: 0,07 mg/m<sup>3</sup>

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, local effects  
Worker Industry: 0,035 mg/m<sup>3</sup>

Exposure Route: Human Inhalation; Exposure Frequency: Short Term, local effects  
Worker Industry: 0,07 mg/m<sup>3</sup>

### 8.2. Exposure controls

Eye protection:

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

Protection for skin:

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

Protection for hands:

Suitable materials for safety gloves; EN ISO 374:

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

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

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

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

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

Respiratory protection:

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

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

In case of insufficient ventilation use mask with ABEKP filters (EN 14387).

Use adequate protective respiratory equipment.

Hygienic and Technical measures

Not available

Appropriate engineering controls:

Not available

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## SECTION 9: Physical and chemical properties

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

Physical state: Liquid

Appearance: liquid

Color: transparent

Odour: Characteristic

Odour threshold: Not available

Melting point / freezing point: Not available

Initial boiling point and boiling range: Not available

Flammability: N.A.

Upper/lower flammability or explosive limits: Not available

Flash point: Not available

Auto-ignition temperature: Not available

Decomposition temperature: Not available

pH: Not available

Viscosity: Not available

Kinematic viscosity: Not available

Solubility in water: partly soluble

Solubility in oil: Not available

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

Vapour pressure: Not available

Relative density: 1.09 g/cm<sup>3</sup>

Vapour density: Not available

#### Particle characteristics:

Particle size: Not available

### 9.2. Other information

Miscibility: Not available

Conductivity: Not available

No other relevant information

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## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Stable under normal conditions

### 10.2. Chemical stability

Stable under normal conditions

### 10.3. Possibility of hazardous reactions

None.

### 10.4. Conditions to avoid

Stable under normal conditions.

### 10.5. Incompatible materials

None in particular.

### 10.6. Hazardous decomposition products

None.

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## SECTION 11: Toxicological information

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

#### Toxicological Information of the Preparation

- |                                  |   |
|----------------------------------|---|
| a) acute toxicity                | The product is classified: Acute Tox. 4(H332)<br>ATEmix - Inhalation (Vapours) : 16.2562 mg/l |
| b) skin corrosion/irritation     | The product is classified: Skin Irrit. 2(H315)  |
| c) serious eye damage/irritation | The product is classified: Eye Dam. 1(H318)   |

|                                      |  |
|--------------------------------------|--|
| d) respiratory or skin sensitisation | The product is classified: Skin Sens. 1B(H317)                                     |
| e) germ cell mutagenicity            | Not classified<br>Based on available data, the classification criteria are not met |
| f) carcinogenicity                   | Not classified<br>Based on available data, the classification criteria are not met |
| g) reproductive toxicity             | Not classified<br>Based on available data, the classification criteria are not met |
| h) STOT-single exposure              | The product is classified: STOT SE 3(H335)   |
| i) STOT-repeated exposure            | Not classified<br>Based on available data, the classification criteria are not met |
| j) aspiration hazard                 | Not classified<br>Based on available data, the classification criteria are not met |

**Toxicological information on main components of the mixture:**

|   |                   |  |               |
|---|-------------------|--|---------------|
| Hexamethylene diisocyanate, oligomers                               | a) acute toxicity | LD50 Oral Rat > 2500 mg/kg                 | ratto femmina |
|   |                   | LD50 Skin Rat > 2000 mg/kg                 |               |
|   |                   | LD50 Skin Rabbit > 2000 mg/kg              |               |
|   |                   | LC50 Inhalation Mist Rat = 0,39 mg/l 4h    | ratto femmina |
|   |                   | LC50 Inhalation Rat = 18500 mg/m3 1h       |               |
| 3-Isocyanatomethyl-3,5, 5-trimethylcyclohexyl isocyanate, oligomers | a) acute toxicity | LC50 Inhalation Rat > 5 mg/l 4h            |               |
|   |                   | LD50 Oral Rat > 14000 mg/kg                |               |
| cyclohexyldimethylamine   | a) acute toxicity | LC50 Inhalation Rat = 1889 mg/m3 2h        |               |
|   |                   | LD50 Oral Rat = 272 mg/kg                  |               |
| hexamethylene-di-isocyanate   | a) acute toxicity | LD50 Oral Rat = 746 mg/kg                  |               |
|   |                   | LC50 Inhalation Vapour Rat = 0,124 mg/l 4h |               |
|   |                   | LD50 Skin Rat > 7000 mg/kg                 |               |
| 3-isocyanatomethyl-3,5, 5-trimethylcyclohexyl isocyanate            | a) acute toxicity | LD50 Skin Rabbit > 5000, mg/kg             |               |
|   |                   | LC50 Inhalation Rat = 0,135 mg/l 4h        |               |
|   |                   | LD50 Oral Rat = 4814, mg/kg                |               |

**11.2. Information on other hazards**

**Endocrine disrupting properties:**

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

**SECTION 12: Ecological information**

**12.1. Toxicity**

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

Eco-Toxicological Information:

**List of Eco-Toxicological properties of the product**

Not classified for environmental hazards.

Based on available data, the classification criteria are not met

**List of Eco-Toxicological properties of the components**

| <b>Component</b>                      | <b>Ident. Numb.</b>                 | <b>Ecotox Data</b>                                  |
|---------------------------------------|-------------------------------------|---|
| Hexamethylene diisocyanate, oligomers | CAS: 28182-81-2 - EINECS: 500-060-2 | a) Aquatic acute toxicity : LC50 Fish > 100 mg/L 96 |



|  |  |  |
|--|--|--|
|  |  | a) Aquatic acute toxicity : EC50 Daphnia > 100 mg/L 48                                 |
|  |  | a) Aquatic acute toxicity : EC50 Algae > 1000 mg/L 72                                  |
|  |  | c) Bacteria toxicity : EC50 Bacteria = 3828 mg/L 3                                     |
| 3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate, oligomers | CAS: 53880-05-0 - EINECS: 500-125-5                      | a) Aquatic acute toxicity : LC50 Fish > 1,51 mg/L 96                                   |
|  |  | a) Aquatic acute toxicity : EC50 Daphnia > 3,36 mg/L 48                                |
|  |  | a) Aquatic acute toxicity : EC50 Algae > 3,1 mg/L 72                                   |
|  |  | c) Bacteria toxicity : EC50 Bacteria > 10000 mg/L 3                                    |
| Phosphoric acid, (ethoxylated tridecyl alcohol) esters             | CAS: 9046-01-9 - EINECS: 618-558-4                       | a) Aquatic acute toxicity : EC50 Fish = 10 mg/L  |
| cyclohexyldimethylamine  | CAS: 98-94-2 - EINECS: 202-715-5                         | a) Aquatic acute toxicity : EC50 Daphnia Daphnia magna Straus = 75 mg/L 48h            |
|  |  | a) Aquatic acute toxicity : EC50 Algae = 3,5 mg/L 72h                                  |
|  |  | a) Aquatic acute toxicity : LC50 Fish = 28,1 mg/L 96h                                  |
| hexamethylene-di-isocyanate  | CAS: 822-06-0 - EINECS: 212-485-8 - INDEX: 615-011-00-1  | a) Aquatic acute toxicity : EC50 Algae = 77,4 mg/L 72                                  |
|  |  | a) Aquatic acute toxicity : LC50 Fish = 8,8 mg/L 96                                    |
|  |  | a) Aquatic acute toxicity : LC50 Fish Brachydanio rerio = 26,1 mg/L 96h IUCLID         |
| 3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate            | CAS: 4098-71-9 - EINECS: 223-861-6 - INDEX: 615-008-00-5 | a) Aquatic acute toxicity : EC50 Daphnia = 27 mg/L 48h                                 |
|  |  | a) Aquatic acute toxicity : IC50 Fish = 4 mg/L 96h                                     |
|  |  | a) Aquatic acute toxicity : NOEC Algae = 4,4 mg/L 72h                                  |
|  |  | a) Aquatic acute toxicity : EC50 Algae Desmodesmus subspicatus = 118,7 mg/L 72h IUCLID |

## 12.2. Persistence and degradability

N.A.

## 12.3. Bioaccumulative potential

N.A.

## 12.4. Mobility in soil

N.A.

## 12.5. Results of PBT and vPvB assessment

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

## 12.6. Endocrine disrupting properties

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

## 12.7. Other adverse effects

Not available

# SECTION 13: Disposal considerations

## 13.1. Waste treatment methods

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

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

Methods of disposal:

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

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

Do not dispose of waste into sewers.

Hazardous waste: Yes

Disposal considerations:

Do not allow to enter drains or watercourses.

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

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

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

Special precautions:

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

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

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

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**SECTION 14: Transport information**

Not classified as dangerous in the meaning of transport 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

Road and Rail (ADR-RID):

Not Applicable

Air (IATA):

Not Applicable

Sea (IMDG):

Not Applicable

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

Not Applicable

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**SECTION 15: Regulatory information**

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

VOC (2004/42/EC) : 90 (A+B) g/l

Dir. 98/24/EC (Risks related to chemical agents at work)

Dir. 2000/39/EC (Occupational exposure limit values)

Regulation (EC) n. 1907/2006 (REACH)

Regulation (EU) n. 2020/878

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

Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013

Regulation (EU) n. 286/2011 (ATP 2 CLP)

Regulation (EU) n. 618/2012 (ATP 3 CLP)

Regulation (EU) n. 487/2013 (ATP 4 CLP)

Regulation (EU) n. 944/2013 (ATP 5 CLP)

Regulation (EU) n. 605/2014 (ATP 6 CLP)

Regulation (EU) n. 2015/1221 (ATP 7 CLP)

Regulation (EU) n. 2016/918 (ATP 8 CLP)

Regulation (EU) n. 2016/1179 (ATP 9 CLP)

Regulation (EU) n. 2017/776 (ATP 10 CLP)

Regulation (EU) n. 2018/669 (ATP 11 CLP)

Regulation (EU) n. 2019/521 (ATP 12 CLP)

Regulation (EU) n. 2018/1480 (ATP 13 CLP)

Regulation (EU) n. 2020/217 (ATP 14 CLP)

Regulation (EU) n. 2020/1182 (ATP 15 CLP)

Regulation (EU) n. 2021/643 (ATP 16 CLP)

Regulation (EU) n. 2021/849 (ATP 17 CLP)

Regulation (EU) n. 2022/692 (ATP 18 CLP)

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

None

**Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:**

Restrictions related to the product: 3

Restrictions related to the substances contained: 40, 74, 75

**SVHC Substances:**

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

**National regulations**

Produktregister Danmark: 4303288

MAL-kode: 5-3 (1993), A+B (10:1): 1-3 (1993)

Lagerklasse (TRGS-510): 12 - Non-combustible liquids, that cannot be assigned to any of the aforementioned LGK

**German Water Hazard Class.**

Class 2: hazardous for water.

**15.2. Chemical safety assessment**

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

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**SECTION 16: Other information**

| <b>Code</b> | <b>Description</b>   |
|-------------|--|
| H226        | Flammable liquid and vapour.   |
| H301        | Toxic if swallowed.  |
| H302        | Harmful if swallowed.  |
| H311        | Toxic in contact with skin.  |
| H314        | Causes severe skin burns and eye damage.                                   |
| H315        | Causes skin irritation.  |
| H317        | May cause an allergic skin reaction.                                       |
| H318        | Causes serious eye damage.   |
| H319        | Causes serious eye irritation.   |
| H330        | Fatal if inhaled.  |
| H331        | Toxic if inhaled.  |
| H332        | Harmful if inhaled.  |
| H334        | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| H335        | May cause respiratory irritation.  |
| H411        | Toxic to aquatic life with long lasting effects.                           |
| H412        | Harmful to aquatic life with long lasting effects.                         |

| <b>Code</b>  | <b>Hazard class and hazard category</b> | <b>Description</b>   |
|--------------|---|--|
| 2.6/3        | Flam. Liq. 3                            | Flammable liquid, Category 3                                 |
| 3.1/1/Inhal  | Acute Tox. 1                            | Acute toxicity (inhalation), Category 1                      |
| 3.1/3/Dermal | Acute Tox. 3                            | Acute toxicity (dermal), Category 3                          |
| 3.1/3/Inhal  | Acute Tox. 3                            | Acute toxicity (inhalation), Category 3                      |
| 3.1/3/Oral   | Acute Tox. 3                            | Acute toxicity (oral), Category 3                            |
| 3.1/4/Inhal  | Acute Tox. 4                            | Acute toxicity (inhalation), Category 4                      |
| 3.1/4/Oral   | Acute Tox. 4                            | Acute toxicity (oral), Category 4                            |
| 3.2/1B       | Skin Corr. 1B                           | Skin corrosion, Category 1B                                  |
| 3.2/2        | Skin Irrit. 2                           | Skin irritation, Category 2                                  |
| 3.3/1        | Eye Dam. 1                              | Serious eye damage, Category 1                               |
| 3.3/2        | Eye Irrit. 2                            | Eye irritation, Category 2                                   |
| 3.4.1/1      | Resp. Sens. 1                           | Respiratory Sensitisation, Category 1                        |
| 3.4.2/1      | Skin Sens. 1                            | Skin Sensitisation, Category 1                               |
| 3.4.2/1B     | Skin Sens. 1B                           | Skin Sensitisation, Category 1B                              |
| 3.8/3        | STOT SE 3                               | Specific target organ toxicity — single exposure, Category 3 |
| 4.1/C2       | Aquatic Chronic 2                       | Chronic (long term) aquatic hazard, category 2               |
| 4.1/C3       | Aquatic Chronic 3                       | Chronic (long term) aquatic hazard, category 3               |

**Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008**

[CLP]:

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

|             |                    |
|-------------|--------------------|
| 3.1/4/Inhal | Calculation method |
| 3.2/2       | Calculation method |
| 3.3/1       | Calculation method |
| 3.4.2/1B    | Calculation method |
| 3.8/3       | Calculation method |

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

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

Main bibliographic sources:

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

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

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This SDS cancels and replaces any preceding release.

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

ACGIH: American Conference of Governmental Industrial Hygienists

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

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

ATE: Acute Toxicity Estimate

ATEmix: Acute toxicity Estimate (Mixtures)

BCF: Biological Concentration Factor

BEI: Biological Exposure Index

BOD: Biochemical Oxygen Demand

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

CAV: Poison Center

CE: European Community

CLP: Classification, Labeling, Packaging.

CMR: Carcinogenic, Mutagenic and Reprotoxic

COD: Chemical Oxygen Demand

COV: Volatile Organic Compound

CSA: Chemical Safety Assessment

CSR: Chemical Safety Report

DMEL: Derived Minimal Effect Level

DNEL: Derived No Effect Level.

DPD: Dangerous Preparations Directive

DSD: Dangerous Substances Directive

EC50: Half Maximal Effective Concentration

ECHA: European Chemicals Agency

EINECS: European Inventory of Existing Commercial Chemical Substances.

ES: Exposure Scenario

GefStoffVO: Ordinance on Hazardous Substances, Germany.

GHS: Globally Harmonized System of Classification and Labeling of Chemicals.

IARC: International Agency for Research on Cancer

IATA: International Air Transport Association.

IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

IC50: half maximal inhibitory concentration

ICAO: International Civil Aviation Organization.

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO).

IMDG: International Maritime Code for Dangerous Goods.

INCI: International Nomenclature of Cosmetic Ingredients.

IRCCS: Scientific Institute for Research, Hospitalization and Health Care

KAFH: KAFH

KSt: Explosion coefficient.

LC50: Lethal concentration, for 50 percent of test population.

LD50: Lethal dose, for 50 percent of test population.

LDLo: Leathal Dose Low

N.A.: Not Applicable  
N/A: Not Applicable  
N/D: Not defined/ Not available  
NA: Not available  
NIOSH: National Institute for Occupational Safety and Health  
NOAEL: No Observed Adverse Effect Level  
OSHA: Occupational Safety and Health Administration.  
PBT: Persistent, Bioaccumulative and Toxic  
PGK: Packaging Instruction  
PNEC: Predicted No Effect Concentration.  
PSG: Passengers  
RID: Regulation Concerning the International Transport of Dangerous Goods by Rail.  
STEL: Short Term Exposure limit.  
STOT: Specific Target Organ Toxicity.  
TLV: Threshold Limiting Value.  
TWATLV: Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).  
vPvB: Very Persistent, Very Bioaccumulative.  
WGK: German Water Hazard Class.

**Paragraphs modified from the previous revision:**

- SECTION 3: Composition/information on ingredients
- SECTION 8: Exposure controls/personal protection
- SECTION 9: Physical and chemical properties
- SECTION 11: Toxicological information
- SECTION 12: Ecological information
- SECTION 15: Regulatory information
- SECTION 16: Other information