# Safety Data Sheet

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

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

**1.1. Product identifier**

Product name **ADHESIVE FOR SPARE PARTS**
UFI : **NHU0-H1JA-Q00P-3VCN**

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

Intended use **Polychloroprene based contact adhesive.**
**For professional and industrial use only.**

Uses Advised Against **Uses other than those stated.**

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

Name **CASTELANELLI FRANCESCO S.R.L.**
Full address **VIA DELLE TERRE ROSSE 38**
District and Country **16133 GENOVA (GE)**
**ITALIA**
**Tel. +39 010 3450548**

e-mail address of the competent person responsible for the Safety Data Sheet **consulenzatecnica@trepini.it**

**1.4. Emergency telephone number**

For urgent inquiries refer to
UNITED KINGDOM NHS 111 (24 hour service / 7 days a week)

IRELAND Members of Public: +353 (01) 809 2166. (8.00 a.m. to 10.00 p.m. 7 days a week)
Healthcare Professionals: +353 (01) 809 2566 (24 hour service – 7 days a week)

MALTA Medicines & Poisons Info Office: (+356) 2545 6508

## 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 2 | H225 | Highly flammable liquid and vapour. |
| Eye irritation, category 2 | H319 | Causes serious eye irritation. |
| Skin irritation, category 2 | H315 | Causes skin irritation. |
| Skin sensitization, category 1 | H317 | May cause an allergic skin reaction. |
| Specific target organ toxicity - single exposure, category 3 | H336 | May cause drowsiness or dizziness. |
| Hazardous to the aquatic environment, acute toxicity, category 1 | H400 | Very toxic to aquatic life. |
| Hazardous to the aquatic environment, chronic toxicity, category 1 | H410 | Very toxic to aquatic life with long lasting effects. |

**2.2. Label elements**

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

Hazard pictograms:

Signal words: Danger

Hazard statements:

| | |
|---|---|
| **H225** | Highly flammable liquid and vapour. |
| **H319** | Causes serious eye irritation. |
| **H315** | Causes skin irritation. |
| **H317** | May cause an allergic skin reaction. |
| **H336** | May cause drowsiness or dizziness. |
| **H410** | Very toxic to aquatic life with long lasting effects. |

Precautionary statements:

| | |
|---|---|
| **P210** | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. |
| **P261** | Avoid breathing vapours. |
| **P273** | Avoid release to the environment. |
| **P280** | Wear protective gloves / eye protection / face protection. |
| **P333+P313** | If skin irritation or rash occurs: Get medical advice / attention. |
| **P370+P378** | In case of fire use to extinguish: carbon dioxide, foam, chemical powder. |
| **Contains:** | FORMALDEHYDE, POLYMER WITH 4-(1,1-DIMETHYLETHYL)PHENOL, 4,4'-(1-METHYLETHYLIDENE)BIS[PHENOL] AND 4-METHYLPHENOL<br>ROSIN<br>CYCLOHEXANE<br>ETHYL ACETATE |

**2.3. Other hazards**
On the basis of available data, the product does not contain any PBT or vPvB in percentage ≥ than 0,1%.
The product does not contain substances with endocrine disrupting properties in concentration ≥ 0.1%.

## SECTION 3. Composition/information on ingredients

**3.2. Mixtures**

Contains:

| Identification | x = Conc. % | Classification (EC) 1272/2008 (CLP) |
|---|---|---|
| **CYCLOHEXANE**<br>CAS 110-82-7<br>EC 203-806-2<br>INDEX 601-017-00-1<br>REACH Reg. 01-2119463273-41-xxxx | 30 ≤ x < 40 | Flam. Liq. 2 H225, Asp. Tox. 1 H304, Skin Irrit. 2 H315, STOT SE 3 H336, Aquatic Acute 1 H400 M=1, Aquatic Chronic 1 H410 M=1 |
| **ETHYL ACETATE**<br>CAS 141-78-6<br>EC 205-500-4<br>INDEX 607-022-00-5<br>REACH Reg. 01-2119475103-46-xxxx | 20 ≤ x < 25 | Flam. Liq. 2 H225, Eye Irrit. 2 H319, STOT SE 3 H336, EUH066 |
| **ACETONE**<br>CAS 67-64-1<br>EC 200-662-2<br>INDEX 606-001-00-8<br>REACH Reg. 01-2119471330-49-xxxx | 7 ≤ x < 10 | Flam. Liq. 2 H225, Eye Irrit. 2 H319, STOT SE 3 H336, EUH066 |
| **HYDROCARBONS, C6, ISOALKANES, <5% N-HEXANE**<br>CAS 64742-49-0<br>EC 931-254-9<br>INDEX -<br>REACH Reg. 01-2119484651-34-xxxx | 5 ≤ x < 8 | Flam. Liq. 2 H225, Asp. Tox. 1 H304, Skin Irrit. 2 H315, STOT SE 3 H336, Aquatic Chronic 2 H411 |
| **FORMALDEHYDE, POLYMER WITH 4-(1,1-DIMETHYLETHYL)PHENOL, 4,4'-(1-METHYLETHYLIDENE)BIS[PHENOL] AND 4-METHYLPHENOL**<br>CAS 26022-00-4<br>EC 607-846-5<br>INDEX - | 3 ≤ x < 5 | Skin Sens. 1 H317 |
| **ROSIN**<br>CAS 8050-09-7<br>EC 232-475-7<br>INDEX 650-015-00-7<br>REACH Reg. 01-2119480418-32-xxxx | 1 ≤ x < 3 | Skin Sens. 1 H317 |

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

## SECTION 4. First aid measures

**4.1. Description of first aid measures**
EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. If problem persists, seek medical advice.

SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention immediately. Wash contaminated clothing before using it again.

INHALATION: Remove to open air. If the subject stops breathing, administer artificial respiration. Get medical advice/attention immediately.

INGESTION: Get medical advice/attention immediately. Do not induce vomiting. Do not administer anything not explicitly authorised by a doctor.

PROTECTIVE MEASURES FOR THE FIRST RESCUE WORKERS: for PPE (personal protection equipment) required for first aid refer to section 8.2 of this safety data sheet.

**4.2. Most important symptoms and effects, both acute and delayed**
Causes serious eye irritation. Causes skin irritation. May cause an allergic skin reaction. May cause drowsiness or dizziness.

**4.3. Indication of any immediate medical attention and special treatment needed**
Treat symptomatically.
In case of accident or if you feel unwell, seek medical advice immediately (show directions for use or safety data sheet if possible).

## 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**

6.1.1 For non-emergency personnel
No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Do not touch or walk through spilled material. Wear appropriate respirator when ventilation is inadequate.
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. Do not breathe fume/mist/vapours. Avoid leakage of the product into the environment.
Non-emergency personnel must follow the appropriate internal procedures in case of accidental release.

6.1.2 For emergency responders
Block the leakage if there is no hazard. Evacuate unprotected and untrained personnel from hazard area. Wear suitable protective equipment. (see Section 8 of this Safety data sheet)
Follow the appropriate internal procedures in case of accidental release.
Keep fumes and vapours under control. Isolate hazard area and deny entry. Ventilate closed spaces before entering. Send away individuals who are not suitably equipped. 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 pressurized. Do not eat, drink or smoke during use. Avoid leakage of the product into the environment.

**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.

**7.3. Specific end use(s)**
No use other than as indicated in section 1.2 of this safety data sheet.

## SECTION 8. Exposure controls/personal protection

**8.1. Control parameters**

Regulatory References:

| | | |
|---|---|---|
| AUS | Österreich | Gesamte Rechtsvorschrift für Grenzwerteverordnung 2021 , Fassung vom 17.06.2021 |
| BEL | Belgique | Liste de valeurs limites d'exposition aux agents chimiques, livre VI du code du bien-être au travail |
| CZE | Česká Republika | Nařízení vlády č. 41/2020 Sb. Nařízení vlády, kterým se mění nařízení vlády č. 361/2007 Sb., kterým se stanoví podmínky ochrany zdraví při práci, ve znění pozdějších předpisů |
| DEU | Deutschland | Technischen Regeln für Gefahrstoffe (TRGS 900) - Liste der Arbeitsplatzgrenzwerte und Kurzzeitwerte. MAK- und BAT-Werte-Liste 2020, Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe, Mitteilung 56 |
| ESP | España | Límites de exposición profesional para agentes químicos en España 2021 |
| FRA | France | Valeurs limites d'exposition professionnelle aux agents chimiques en France. ED 984 - INRS |
| 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 |
| HRV | Hrvatska | Pravilnik o izmjenama i dopunama Pravilnika o zaštiti radnika od izloženosti opasnimkemikalijama na radu, graničnim vrijednostima izloženosti i biološkim graničnim vrijednostima (NN 1/2021) |
| ITA | Italia | Decreto Legislativo 9 Aprile 2008, n.81 |
| NLD | Nederland | Arbeidsomstandighedenregeling. Lijst van wettelijke grenswaarden op grond van de artikelen 4.3, eerste lid, en 4.16, eerste lid, van het Arbeidsomstandighedenbesluit |
| PRT | Portugal | Decreto-Lei n.º 1/2021 de 6 de janeiro, valores-limite de exposição profissional indicativos para os agentes químicos. Decreto-Lei n.º 35/2020 de 13 de julho, proteção dos trabalhadores contra os riscos ligados à exposição durante o trabalho a agentes cancerígenos ou mutagénicos |
| POL | Polska | Rozporządzenie ministra rozwoju, pracy i technologii z dnia 18 lutego 2021 r. Zmieniające rozporządzenie w sprawie najwyższych dopuszczalnych stężeń i natężeń czynników szkodliwych dla zdrowia w środowisku pracy |
| SVK | Slovensko | NARIADENIE VLÁDY Slovenskej republiky z 12. augusta 2020, ktorým sa mení a dopĺňa nariadenie vlády Slovenskej republiky č. 356/2006 Z. z. o ochrane zdravia zamestnancov pred rizikami súvisiacimi s expozíciou karcinogénnym a mutagénnym faktorom pri práci v |

| | | |
|---|---|---|
| | | znení neskorších predpisov |
| SVN | Slovenija | Pravilnik o varovanju delavcev pred tveganji zaradi izpostavljenosti kemičnim snovem pri delu (Uradni list RS, št. 100/01, 39/05, 53/07, 102/10, 43/11 – ZVZD-1, 38/15, 78/18 in 78/19) |
| 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. |
| | TLV-ACGIH | ACGIH 2021 |

**CYCLOHEXANE**

**Threshold Limit Value**

| Type | Country | TWA/8h | | STEL/15min | | Remarks / Observations |
|---|---|---|---|---|---|---|
| | | mg/m3 | ppm | mg/m3 | ppm | |
| MAK | AUS | 700 | 200 | 2800 | 800 | Häufigkeit pro Schicht:4x |
| VLEP | BEL | 350 | 100 | | | |
| TLV | CZE | 700 | 200,2 | 2000 | 572 | |
| AGW | DEU | 700 | 200 | 2800 | 800 | |
| MAK | DEU | 700 | 200 | 2800 | 800 | |
| VLA | ESP | 700 | 200 | | | |
| VLEP | FRA | 700 | 200 | 1300 | 375 | 11 |
| TLV | GRC | 700 | 200 | | | |
| AK | HUN | 700 | | | | |
| GVI/KGVI | HRV | 700 | 200 | | | SKIN |
| VLEP | ITA | 350 | 100 | | | |
| TGG | NLD | 700 | | 1400 | | |
| VLE | PRT | 700 | 200 | | | |
| NDS/NDSCh | POL | 300 | | 1000 | | SKIN |
| NPEL | SVK | 700 | 200 | | | |
| MV | SVN | 700 | 200 | 2800 | 800 | |
| WEL | GBR | 350 | 100 | 1050 | 300 | |
| OEL | EU | 700 | 200 | | | |
| TLV-ACGIH | | 344 | 100 | | | |

| Predicted no-effect concentration - PNEC | | |
|---|---|---|
| Normal value in fresh water | 0,207 | mg/l |
| Normal value in marine water | 0,207 | mg/l |
| Normal value for fresh water sediment | 16,68 | mg/kg dw |
| Normal value for marine water sediment | 16,68 | mg/kg dw |
| Normal value for water, intermittent release | 0,207 | mg/l |
| Normal value of STP microorganisms | 3,24 | mg/l |
| Normal value for the terrestrial compartment | 3,38 | mg/kg dw |

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

| | Effects on consumers | | | | Effects on workers | | | |
|---|---|---|---|---|---|---|---|---|
| Route of exposure | Acute local | Acute systemic | Chronic local | Chronic systemic | Acute local | Acute systemic | Chronic local | Chronic systemic |
| Oral | | | | 59,4 mg/kg bw/d | | | | |
| Inhalation | 412 mg/m3 | 412 mg/m3 | 206 mg/m3 | 206 mg/m3 | 1400 mg/m3 | 1400 mg/m3 | 700 mg/m3 | 700 mg/m3 |
| Skin | | | | 1186 mg/kg bw/d | | | | 2016 mg/kg bw/d |

**ETHYL ACETATE**

**Threshold Limit Value**

| Type | Country | TWA/8h | | STEL/15min | | Remarks / Observations |
|---|---|---|---|---|---|---|
| | | mg/m3 | ppm | mg/m3 | ppm | |
| MAK | AUS | 734 | 200 | 1468 | 400 | Häufigkeit pro Schicht:4x |
| VLEP | BEL | 734 | 200 | 1468 | 400 | |
| TLV | CZE | 700 | 191,1 | 900 | 245,7 | |
| AGW | DEU | 730 | 200 | 1460 | 400 | |
| MAK | DEU | 750 | 200 | 1500 | 400 | |
| VLA | ESP | 734 | 200 | 1468 | 400 | |
| VLEP | FRA | 734 | 200 | 1468 | 400 | |
| TLV | GRC | 734 | 200 | 1468 | 400 | |
| AK | HUN | 734 | | 1468 | | |
| GVI/KGVI | HRV | 734 | 200 | 1468 | 400 | |
| VLEP | ITA | 734 | 200 | 1468 | 400 | |
| TGG | NLD | 734 | | 1468 | | |
| VLE | PRT | 734 | 200 | 1468 | 400 | |
| NDS/NDSCh | POL | 734 | | 1468 | | |
| NPEL | SVK | 734 | 200 | 1468 | 400 | |
| MV | SVN | 734 | 200 | 1468 | 400 | |
| WEL | GBR | 734 | 200 | 1468 | 400 | |
| OEL | EU | 734 | 200 | 1468 | 400 | |
| TLV-ACGIH | | 1441 | 400 | | | |

| Predicted no-effect concentration - PNEC | | |
|---|---|---|
| Normal value in fresh water | 0,24 | mg/l |
| Normal value in marine water | 0,024 | mg/l |
| Normal value for fresh water sediment | 1,15 | mg/kg dw |
| Normal value for marine water sediment | 0,115 | mg/kg dw |
| Normal value for water, intermittent release | 1,65 | mg/l |
| Normal value of STP microorganisms | 650 | mg/l |
| Normal value for the food chain (secondary poisoning) | 0,2 | g/kg |
| Normal value for the terrestrial compartment | 0,148 | mg/kg dw |

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

| | Effects on consumers | | | | Effects on workers | | | |
|---|---|---|---|---|---|---|---|---|
| Route of exposure | Acute local | Acute systemic | Chronic local | Chronic systemic | Acute local | Acute systemic | Chronic local | Chronic systemic |
| Oral | | | | 4,5 mg/kg bw/d | | | | |
| Inhalation | 734 mg/m3 | 734 mg/m3 | 367 mg/m3 | 367 mg/m3 | 1468 mg/m3 | 1468 mg/m3 | 734 mg/m3 | 734 mg/m3 |
| Skin | | | | 37 mg/kg bw/d | | | | 63 mg/kg bw/d |

**ACETONE**

**Threshold Limit Value**

| Type | Country | TWA/8h | | STEL/15min | | Remarks / Observations |
|---|---|---|---|---|---|---|
| | | mg/m3 | ppm | mg/m3 | ppm | |
| MAK | AUS | 1200 | 500 | 4800 | 2000 | Häufigkeit pro Schicht:4x |
| VLEP | BEL | 594 | 246 | 1187 | 492 | |
| TLV | CZE | 800 | 331,2 | 1500 | 621 | |
| AGW | DEU | 1200 | 500 | 2400 (C) | 1000 (C) | |
| MAK | DEU | 1200 | 500 | 2400 | 1000 | |
| VLEP | FRA | 1210 | 500 | 2420 | 1000 | |
| TLV | GRC | 1780 | | 3560 | | |
| AK | HUN | 1210 | | | | |
| GVI/KGVI | HRV | 1210 | 500 | | | |
| VLEP | ITA | 1210 | 500 | | | |
| TGG | NLD | 1210 | | 2420 | | |
| VLE | PRT | 1210 | 500 | | | |
| NDS/NDSCh | POL | 600 | | 1800 | | |
| NPEL | SVK | 1210 | 500 | | | |
| MV | SVN | 1210 | 500 | 2420 | 1000 | |
| WEL | GBR | 1210 | 500 | 3620 | 1500 | |
| OEL | EU | 1210 | 500 | | | |
| TLV-ACGIH | | | 250 | | 500 | |

| Predicted no-effect concentration - PNEC | | |
|---|---|---|
| Normal value in fresh water | 10,6 | mg/l |
| Normal value in marine water | 1,06 | mg/l |
| Normal value for fresh water sediment | 30,4 | mg/kg dw |
| Normal value for marine water sediment | 3,04 | mg/kg dw |
| Normal value for water, intermittent release | 21 | mg/l |
| Normal value of STP microorganisms | 100 | mg/l |
| Normal value for the terrestrial compartment | 29,5 | mg/kg dw |

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

| | Effects on consumers | | | | Effects on workers | | | |
|---|---|---|---|---|---|---|---|---|
| Route of exposure | Acute local | Acute systemic | Chronic local | Chronic systemic | Acute local | Acute systemic | Chronic local | Chronic systemic |
| Oral | | | | 62 mg/kg bw/d | | | | |
| Inhalation | | | | 200 mg/m3 | 2420 mg/m3 | | | 1210 mg/m3 |
| Skin | | | | 62 mg/kg bw/d | | | | 186 mg/kg bw/d |

**HYDROCARBONS, C6, ISOALKANES, <5% N-HEXANE**

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

| | Effects on consumers | | | | Effects on workers | | | |
|---|---|---|---|---|---|---|---|---|
| Route of exposure | Acute local | Acute systemic | Chronic local | Chronic systemic | Acute local | Acute systemic | Chronic local | Chronic systemic |
| Oral | | | | 1301 mg/kg bw/d | | | | |
| Inhalation | | | | 1131 mg/m3 | | | | 5306 mg/m3 |
| Skin | | | | 1377 mg/kg bw/d | | | | 13964 mg/kg bw/d |

**ROSIN**

**Threshold Limit Value**

| Type | Country | TWA/8h | | STEL/15min | | Remarks / Observations |
|---|---|---|---|---|---|---|
| | | mg/m3 | ppm | mg/m3 | ppm | |
| TLV | CZE | 1 | | | | INHAL |
| GVI/KGVI | HRV | 0,05 | | 0,15 | | |
| WEL | GBR | 0,05 | | 0,15 | | |

| Predicted no-effect concentration - PNEC | | |
|---|---|---|
| Normal value in fresh water | 0,0016 | mg/l |
| Normal value in marine water | 0,00016 | mg/l |
| Normal value for fresh water sediment | 0,007 | mg/kg dw |
| Normal value for marine water sediment | 0,0007 | mg/kg dw |
| Normal value for water, intermittent release | 0,016 | mg/l |
| Normal value of STP microorganisms | 1000 | mg/l |
| Normal value for the terrestrial compartment | 0,00045 | mg/kg dw |

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

| | Effects on consumers | | | | Effects on workers | | | |
|---|---|---|---|---|---|---|---|---|
| Route of exposure | Acute local | Acute systemic | Chronic local | Chronic systemic | Acute local | Acute systemic | Chronic local | Chronic systemic |
| Oral | | | | 1,065 mg/kg bw/d | | | | |
| Inhalation | | | | | | | 10 mg/m3 | |
| Skin | | | | 1,065 mg/kg bw/d | | | | 2,131 mg/kg bw/d |

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.

ACETONE
Biological Exposure Indices (IBE): Acetone in urine: 25 mg / L Time of collection: end of shift. (ACGIH 2021).

HYDROCARBONS, C6, ISOALKANES, <5% N-HEXANE
Biological Exposure Indices (IBE): 2,5-Hexanedione in urine: 0,5 mg / L. Time of withdrawal: end of shift. (ACGIH 2021).

**8.2. Exposure controls**

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.
When choosing personal protective equipment, ask your chemical substance supplier for advice.
Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

HAND PROTECTION
Protect hands with category III work gloves (see standard EN 374).
The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.
The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

SKIN PROTECTION
Wear category II professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

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 166).

RESPIRATORY PROTECTION
If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, wear a mask with a type AX filter, whose limit of use will be defined by the manufacturer (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.
Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.
If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

ENVIRONMENTAL EXPOSURE CONTROLS
The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

Product residues must not be indiscriminately disposed of with waste water or by dumping in waterways.

## SECTION 9. Physical and chemical properties

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

| Properties | Value | Information |
|---|---|---|
| Appearance | viscous liquid | |
| Colour | straw yellow | |
| Odour | characteristic of solvent | |
| Melting point / freezing point | not available | |
| Initial boiling point | > 55 °C | |
| Flammability | not available | |
| Lower explosive limit | not available | |
| Upper explosive limit | not available | |
| Flash point | < -1 °C | |
| Auto-ignition temperature | not available | |
| Decomposition temperature | not available | |
| pH | Not applicable | |
| Kinematic viscosity | >20,5 mm2/sec (40°C) | |
| Solubility | immiscible with water | |
| Partition coefficient: n-octanol/water | not available | |
| Vapour pressure | not available | |
| Density and/or relative density | not available | |
| 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) | 76,00 % |

## SECTION 10. Stability and reactivity

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

ACETONE
Decomposes under the effect of heat.

**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.

CYCLOHEXANE
May react violently with: strong oxidants, liquid nitric oxide. Forms explosive mixtures with: air.

ETHYL ACETATE
Risk of explosion on contact with: alkaline metals, hydrides, oleum. May react violently with: fluorine, strong oxidising agents, chlorosulphuric acid, potassium tert-butoxide. Forms explosive mixtures with: air.

ACETONE
Risk of explosion on contact with: bromine trifluoride, fluorine dioxide, hydrogen peroxide, nitrosyl chloride, 2-methyl-1,3 butadiene, nitromethane, nitrosyl perchlorate. May react dangerously with: potassium tert-butoxide, alkaline hydroxides, bromine, bromoform, isoprene, sodium, sulphur dioxide, chromium trioxide, chromyl chloride, nitric acid, chloroform, peroxymonosulphuric acid, phosphoryl oxychloride, chromosulphuric acid, fluorine, strong oxidising agents, strong reducing agents. Develops flammable gas on contact with: nitrosyl perchlorate.

**10.4. Conditions to avoid**
Avoid overheating. Avoid bunching of electrostatic charges. Avoid all sources of ignition.

CYCLOHEXANE
Avoid contact with: oxygen, strong oxidising agents. Avoid exposure to: heat, naked flames, ignition sources.

ETHYL ACETATE
Avoid exposure to: light, sources of heat, naked flames.

ACETONE
Avoid exposure to: sources of heat, naked flames.

HYDROCARBONS, C6, ISOALKANES, <5% N-HEXANE
Avoid exposure to: naked flames, ignition sources.

**10.5. Incompatible materials**

CYCLOHEXANE
Incompatible materials: natural rubbers, neoprene, polyvinyl chloride, polyethylene.

ETHYL ACETATE
Incompatible with: acids, bases, strong oxidants, aluminium, nitrates, chlorosulphuric acid. Incompatible materials: plastic materials.

ACETONE
Incompatible with: acids, oxidising substances.

HYDROCARBONS, C6, ISOALKANES, <5% N-HEXANE
Incompatible with: strong oxidising agents.

**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.

ACETONE
May develop: ketenes, irritant substances.

## SECTION 11. Toxicological information

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

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

Metabolism, toxicokinetics, mechanism of action and other information

ETHYL ACETATE
Method: study report (1998)
Reliability (Klimisch score): 1
Species: rat (Sprague-Dawley; Male / Female)
Routes of exposure: intravenous and in vitro
Results: After intravenous injection, ethyl ethanol was rapidly hydrolyzed to ethanol. The half-life in the blood was calculated at 33-37 seconds.

ACETONE
Acetone is rapidly absorbed by inhalation, ingestion and through the skin and is rapidly distributed throughout the body, particularly in organs with a high water content. It is completely metabolized and the formation of metabolites is dose-related: at low doses there is the formation of methylglyoxal, at higher doses there is the formation of propanediol. The elimination of low concentrations occurs through the exhaled air, while if the concentration is equal to or greater than 15 ppm the elimination also takes place through the urine.

Information on likely routes of exposure

CYCLOHEXANE
WORKERS: inhalation; contact with the skin.
POPULATION: ingestion of contaminated food or water; inhalation of ambient air; contact with the skin of products containing the substance.

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

CYCLOHEXANE
It is irritating to the skin and mucous membranes, and can be absorbed by the skin; neurological action can occur at high doses and is largely due to its metabolite cyclohexanone.

Interactive effects

CYCLOHEXANE
The substance may enhance the effects of agents such as tri-ortho-cresyl phosphate (TOCP).

ACUTE TOXICITY

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

CYCLOHEXANE
Method: equivalent or similar to OECD 401
Reliability (Klimisch score): 2
Species: rat (Male / Female)
Routes of exposure: oral
Results: LD50 > 5000 mg/kg
Method: equivalent or similar to OECD 403
Reliability (Klimisch score): 2
Species: rat (Male / Female)
Routes of exposure: inhalation (vapors)
Results: LC50 > 32,8 mg/l/4h
Method: equivalent or similar to OECD 402
Reliability (Klimisch score): 2
Species: rabbit (Male / Female)
Routes of exposure: cutaneous
Results: LD50 > 2000 mg/kg.

ETHYL ACETATE
Method: equivalent or similar to OECD 401
Reliability (Klimisch score): 2
Species: rabbit (Male / Female)
Routes of exposure: oral
Results: LD50 = 4934 mg/kg
Bibliographic reference: "Range finding toxicity data: List VI" (Am Ind Hyg Ass J, 23, 95 (1962))
Reliability (Klimisch score): 2
Species: rabbit (New Zealand White; Male)
Routes of exposure: cutaneous
Results: LD50 > 20000 mg/kg.

ACETONE
Reference: Freeman JJ et al., J Toxicol Environ Health (1985)
Method: no guidelines
Reliability (Klimisch score): 2
Species: Rat (Sprague-Dawley; Female)
Routes of exposure: oral
Results: LD50 = 5800 mg/kg bw
Reference: Bruckner JV et al. , Toxicol Appl Pharmacol (1981)
Method: no guidelines
Reliability (Klimisch score): 2
Species: Rat (Sprague-Dawley; Male)
Routes of exposure: inhalation (vapors)
Results: LC50 = 132 mg/l air/3h
Reference: Roudabush RL et al., Toxicol Appl Pharmacol (1965)
Method: no guidelines
Reliability (Klimisch score): 2
Species: Rabbit (White; Male / Female)
Routes of exposure: cutaneous
Results: LD50 = 7400 mg/kg bw

HYDROCARBONS, C6, ISOALKANES, <5% N-HEXANE
Method: equivalent or similar to OECD 401
Reliability (Klimisch score): 2
Species: rat (Long-Evans; Male / Female)
Routes of exposure: oral
Results: LD50 > 16750 mg/kg
Method: equivalent or similar to OECD 403
Reliability (Klimisch score): 2
Species: rat (Long-Evans; Male)
Routes of exposure: inhalation (vapors)

Results: LC50 = 259,354 mg/l 4h
Method: equivalent or similar to OECD 403
Reliability (Klimisch score): 2
Species: rabbit (New Zealand White; Male)
Routes of exposure: cutaneous
Results: LD50 > 3350 mg/kg.

FORMALDEHYDE, POLYMER WITH 4-(1,1-DIMETHYLETHYL)PHENOL, 4,4'-(1-METHYLETHYLIDENE)BIS[PHENOL] AND 4-METHYLPHENOL
Based on the strength of evidence of the available data as determined by expert judgment, the substance is not classified for the acute toxicity hazard class.

ROSIN
Method: OECD 423
Reliability (Klimisch score): 1
Species: rat (Sprague-Dawley; Female)
Routes of exposure: oral
Results: LD50 > 2000 mg/kg
Method: OECD 402
Reliability (Klimisch score): 1
Species: rat (Sprague-Dawley; Male / Female)
Routes of exposure: cutaneous
Results: LD50 > 2000 mg/kg

SKIN CORROSION / IRRITATION
Causes skin irritation

CYCLOHEXANE
Based on the strength of evidence of the available data as determined by expert judgment, the substance is classified as a skin irritant.

ETHYL ACETATE
Method: "Classification of Corrosive Hazards", Federal Reg vol 37, 57 (1972)
Reliability (Klimisch score): 2
Species: rabbit (New Zealand White)
Routes of exposure: cutaneous.
Results: not irritating

ACETONE
Reference: Anderson C. et al., Contact Dermatitis 15: 143-151 (1986)
Method: no guidelines
Reliability (Klimisch score): 2
Species: Guinea pig (Dunkin-Hartley)
Routes of exposure: cutaneous
Results: non-irritating

HYDROCARBONS, C6, ISOALKANES, <5% N-HEXANE
Based on the evidence of available data, determined by the judgement of experts, the substance is classified as skin irritating

FORMALDEHYDE, POLYMER WITH 4-(1,1-DIMETHYLETHYL)PHENOL, 4,4'-(1-METHYLETHYLIDENE)BIS[PHENOL] AND 4-METHYLPHENOL
Based on the strength of evidence of the available data determined by expert judgment, the substance is not classified for the skin corrosion / irritation hazard class

SERIOUS EYE DAMAGE / IRRITATION
Causes serious eye irritation

CYCLOHEXANE
Method: equivalent or similar to OECD 405
Reliability (Klimisch score): 2
Species: rabbit
Routes of exposure: ocular
Results: mild irritation.
Based on the strength of evidence of the available data as determined by expert judgment, the substance is not classified for the hazard class of serious eye damage / eye irritation.

ETHYL ACETATE
Method: equivalent or similar to OECD 405
Reliability (Klimisch score): 2
Species: rabbit (New Zealand White)
Routes of exposure: ocular
Results: irritating. (Harmonized classification, Annex VI, Regulation 1272/2008)

ACETONE
Method: equivalent or similar to OECD 405
Reliability (Klimisch score): 1
Species: rabbit (New Zealand White)
Routes of exposure: ocular
Result: irritating (Harmonized classification, Annex VI, Regulation 1272/2008)

HYDROCARBONS, C6, ISOALKANES, <5% N-HEXANE
Method: equivalent or similar to OECD 405
Reliability (Klimisch score): 2
Species: rabbit (New Zealand White)
Exposure: eye
Results: not irritating

FORMALDEHYDE, POLYMER WITH 4-(1,1-DIMETHYLETHYL)PHENOL, 4,4'-(1-METHYLETHYLIDENE)BIS[PHENOL] AND 4-METHYLPHENOL
Based on the strength of evidence of the available data as determined by expert judgment, the substance is not classified for the hazard class of serious eye damage / eye irritation

RESPIRATORY OR SKIN SENSITISATION
Sensitising for the skin

CYCLOHEXANE
Method: equivalent or similar to EU B.6
Reliability (Klimisch score): 1
Species: guinea pig (Hartely; Male / Female)
Routes of exposure: cutaneous
Results: not sensitizing.

ETHYL ACETATE
Method: OECD 406
Reliability (Klimisch score): 1
Species: guinea pig (Dunkin-Hartley; Female)
Routes of exposure: cutaneous.
Results: non-sensitizing.

ACETONE
Reference: Nakamura A. et al., Contact Dermatitis 31: 72-85 (1994)
Method: no guidelines
Reliability (Klimisch score): 2
Species: guinea pig (Hartley; Female)
Routes of exposure: cutaneous
Result: not sensitizing

HYDROCARBONS, C6, ISOALKANES, <5% N-HEXANE
Method: equivalent or similar to OECD 429
Reliability (Klimisch score): 2
Species: mouse
Routes of exposure: cutaneous.
Results: non-sensitizing.

FORMALDEHYDE, POLYMER WITH 4-(1,1-DIMETHYLETHYL)PHENOL, 4,4'-(1-METHYLETHYLIDENE)BIS[PHENOL] AND 4-METHYLPHENOL
Based on the strength of evidence of the available data as determined by expert judgment, the substance is classified as a skin sensitizer.

ROSIN
Method: OECD 429
Reliability (Klimisch score): 1
Species: mouse (CBA; Female)
Routes of exposure: cutaneous
Results: sensitizer (Harmonized classification, Annex VI, Regulation 1272/2008)

GERM CELL MUTAGENICITY
Does not meet the classification criteria for this hazard class

CYCLOHEXANE
Method: Clive and Spector (1975) -In vitro test
Reliability (Klimisch score): 1
Species: Mouse (lymphoma cells)
Results: negative with and without metabolic activation
Method: equivalent or similar to OECD 475 - In vivo test
Reliability (Klimisch score): 1
Species: rat (CRL: COBS CD (SD) BR; Male / Female)

Routes of exposure: inhalation (vapors)
Results: negative.

ETHYL ACETATE
Method: equivalent or similar to OECD 473 - In vitro test
Reliability (Klimisch score): 2
Species: Chinese hamster (ovary)
Results: negative
Method: equivalent or similar to OECD 474 - In vivo test
Reliability (Klimisch score): 2
Species: Chinese hamster (Male / Female)
Routes of exposure: oral
Results: negative.

ACETONE
Method: equivalent or similar to OECD 471 - in vitro test
Reliability (Klimisch score): 1
Species: S. typhimurium
Result: negative
Reference: National Toxicology Program (NTP) (1991) - In vivo testing
Method: no guidelines
Reliability (Klimisch score): 2
Species: Mouse (B6C3F1; Male / Female)
Routes of exposure: oral
Results: negative

HYDROCARBONS, C6, ISOALKANES, <5% N-HEXANE
Method: equivalent or similar to OECD 471 - In vitro test
Reliability (Klimisch score): 1
Species: S. typhimurium
Results: negative with and without metabolic activation
Method: equivalent or similar to OECD 475 - In vivo test
Reliability (Klimisch score): 1
Species: Rat (Sprague-Dawley; Male / Female)
Routes of exposure: inhalation (vapor)
Results: negative.

FORMALDEHYDE, POLYMER WITH 4-(1,1-DIMETHYLETHYL)PHENOL, 4,4'-(1-METHYLETHYLIDENE)BIS[PHENOL] AND 4-METHYLPHENOL
Based on available data, the substance has no mutagenic effects and is not classified under the CLP hazard class of germ cell mutagenicity

CARCINOGENICITY
Does not meet the classification criteria for this hazard class

CYCLOHEXANE
Not available data.

ETHYL ACETATE
Reference: Cancer Res. 33: 3069 - 3085. (1973)
Reliability (Klimisch score): 2
Species: mouse (A / He; Male / Female)
Exposure routes: intraperitoneal
Results: negative

ACETONE
Reference: Van Duuren BL et al., Cancer Res 38: 3236-3240 (1978)
Method: no guidelines
Reliability (Klimisch score): 2
Species: Mouse (ICR; Female)
Routes of exposure: cutaneous
Results: negative

HYDROCARBONS, C6, ISOALKANES, <5% N-HEXANE
Method: equivalent or similar to OECD 451
Reliability (Klimisch score): 1
Species: mouse (B6C3F1; Male / Female)
Routes of exposure: inhalation (vapors)
Results: Negative. NOAEC (carcinogenicity) = 3000 ppm;

FORMALDEHYDE, POLYMER WITH 4-(1,1-DIMETHYLETHYL)PHENOL, 4,4'-(1-METHYLETHYLIDENE)BIS[PHENOL] AND 4-METHYLPHENOL
Based on available data, the substance has no carcinogenic effects and is not classified under the CLP hazard class of carcinogenicity

REPRODUCTIVE TOXICITY
Does not meet the classification criteria for this hazard class

ACETONE
Based on available data, the substance has no reproductive toxicity effects and is not classified under the relevant hazard class CLP.

FORMALDEHYDE, POLYMER WITH 4-(1,1-DIMETHYLETHYL)PHENOL, 4,4'-(1-METHYLETHYLIDENE)BIS[PHENOL] AND 4-METHYLPHENOL
Based on available data, the substance has no reproductive toxicity effects and is not classified under the relevant hazard class CLP.

Adverse effects on sexual function and fertility

CYCLOHEXANE
Method: equivalent or similar to OECD 416
Reliability (Klimisch score): 1
Species: rat (Crl: CD BR; Male / Female)
Routes of exposure: inhalation (vapors)
Results: negative.

ETHYL ACETATE
Method: US EPA "Health Effects Testing Guidelines 40 CFR Part 798.2450"
Reliability (Klimisch score): 1
Species: rat (Sprague-Dawley; Male)
Routes of exposure: inhalation (vapors)
Results: negative
NOAEL results: 1500 ppm.

HYDROCARBONS, C6, ISOALKANES, <5% N-HEXANE
Method: equivalent or similar to OECD 416
Reliability (Klimisch score): 1
Species: Rat (Sprague-Dawley; Male / Female)
Routes of exposure: inhalation (vapors)
Results: negative. NOAEC (Male / Female) = 3000 ppm.

Adverse effects on development of the offspring

CYCLOHEXANE
Method: equivalent or similar to OECD 414
Reliability (Klimisch score): 1
Species: rat (Crl: CD BR)
Routes of exposure: inhalation (vapors)
Results: negative. NOAEC results (maternal): 500 - 2000 ppm. NOAEC results (development): 7000 ppm

ETHYL ACETATE
Method: equivalent or similar to OECD 414
Reliability (Klimisch score): 2
Species: mouse (CD-1)
Routes of exposure: oral
Results: negative. NOAEL (maternal): 2200 mg/kg body weight/day. NOAEL (development) > 3600 mg/kg body weight/day.

ACETONE
Method: equivalent or similar to OECD 414
Reliability (Klimisch score): 1
Species: rat (Sprague-Dawley)
Routes of exposure: inhalation (aerosol)
Result: no teratogenic effect.

HYDROCARBONS, C6, ISOALKANES, <5% N-HEXANE
Method: equivalent or similar to OECD 414
Reliability (Klimisch score): 1
Species: mouse (CD-1)
Routes of exposure: inhalation (vapors)
Results: negative. NOAEC (development) = 3000 ppm.

STOT - SINGLE EXPOSURE
May cause drowsiness or dizziness

CYCLOHEXANE
Based on available data, the substance exhibits specific target organ toxicity effects from single exposure and is classified under the relevant CLP hazard class.
Target organ: Central nervous system.
Route of exposure: Inhalation.

ETHYL ACETATE
The substance may cause drowsiness or dizziness (Harmonized classification, Annex VI, Regulation 1272/2008)
Target organ: Central nervous system.
Route of exposure: Inhalation.

ACETONE
May cause drowsiness or dizziness (Harmonized classification, Annex VI, CLP Reg.)
Target organ: Central nervous system.
Route of exposure: Inhalation.

HYDROCARBONS, C6, ISOALKANES, <5% N-HEXANE
Based on the available data, the substance may cause drowsiness or dizziness on single exposure and is classified under the relevant CLP hazard class.
Target organ: Central nervous system.
Route of exposure: Inhalation.

FORMALDEHYDE, POLYMER WITH 4-(1,1-DIMETHYLETHYL)PHENOL, 4,4'-(1-METHYLETHYLIDENE)BIS[PHENOL] AND 4-METHYLPHENOL
Based on available data, the substance has no specific target organ toxicity effects for single exposure and is not classified under the relevant CLP hazard class

STOT - REPEATED EXPOSURE
Does not meet the classification criteria for this hazard class

CYCLOHEXANE
Method: EPA OPPTS 870.3465
Reliability (Klimisch score): 1
Species: rat (Crl: CD BR)
Routes of exposure: inhalation (vapors)
Results: negative. NOAEC (Acute Transient Damage / Hearing Damage): 500 ppm. NOAEC (subchronic damage / histopathological results): 7000 ppm

ETHYL ACETATE
Based on the available data, the substance has no specific target organ toxicity effects due to repeated exposure and is not classified under the relevant CLP hazard class
Method: equivalent or similar to EPA OTS 795.2600
Reliability (Klimisch score): 2
Species: rat (Sprague-Dawley; Male / Female)
Routes of exposure: oral
Results: negative. NOAEL: 900 mg/kg body weight/day
Method: EPA OTS 798.2450
Reliability (Klimisch score): 1
Species: rat (Crl: CD BR; Male / Female)
Routes of exposure: inhalation
Results: negative.

ACETONE
Method: equivalent or similar to OECD 408
Reliability (Klimisch score): 1
Species: rat (Fischer 344; Male / Female)
Routes of exposure: oral
Result: negative

HYDROCARBONS, C6, ISOALKANES, <5% N-HEXANE
Method: equivalent or similar to OECD 413
Reliability (Klimisch score): 1
Species: Rat (Fischer 344)
Routes of exposure: inhalation (vapor)
Results: negative. NOAEL = 2984 ppm.

FORMALDEHYDE, POLYMER WITH 4-(1,1-DIMETHYLETHYL)PHENOL, 4,4'-(1-METHYLETHYLIDENE)BIS[PHENOL] AND 4-METHYLPHENOL
Based on available data, the substance has no specific target organ toxicity effects on repeated exposure and is not classified under the relevant CLP hazard class

ASPIRATION HAZARD
Does not meet the classification criteria for this hazard class. Viscosity: >20,5 mm2/sec (40°C)

CYCLOHEXANE
Based on the available data, the substance is aspirated hazardous and is classified under the relevant hazard class CLP.

ETHYL ACETATE
No available data for the hazard class CLP of aspiration hazard.

ACETONE
No data are available on aspiration hazard.

HYDROCARBONS, C6, ISOALKANES, <5% N-HEXANE
For petroleum products with viscosity lower than 20.5mm2 / s at 40 °C, a specific risk is linked to the aspiration of the liquid into the lungs which can occur directly following ingestion, or subsequently in case of spontaneous or provoked vomiting. Based on the available data, the substance is aspirated hazardous and is classified under the relevant hazard class CLP

FORMALDEHYDE, POLYMER WITH 4-(1,1-DIMETHYLETHYL)PHENOL, 4,4'-(1-METHYLETHYLIDENE)BIS[PHENOL] AND 4-METHYLPHENOL
No data are available on the hazard in case of 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.

## SECTION 12. Ecological information

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

**12.1. Toxicity**

HYDROCARBONS, C6, ISOALKANES, <5% N-HEXANE

| | |
|---|---|
| CYCLOHEXANE | |
| LC50 - for Fish | 4,53 mg/l/96h Pimephales promelas (equivalent or similar to OECD 203) |
| EC50 - for Crustacea | 3,89 mg/l/48h Daphnia magna (equivalent or similar to OECD 202) |
| EC50 - for Algae / Aquatic Plants | 32,7 mg/l/72h Chlorella vulgaris (equivalent or similar to OECD 201) |
| ETHYL ACETATE | |
| LC50 - for Fish | 230 mg/l/96h (Pimephales promelas; US EPA E03-05) |
| EC50 - for Crustacea | 1350 mg/l/48h (Hydra Oligactis;Aquat. Toxicol. 4, 73 - 82 (1983)) |
| Chronic NOEC for Fish | > 75,6 mg/l 32d (Pimephales promelas; equivalent or similar to OECD 210) |
| Chronic NOEC for Crustacea | 2,4 mg/l 21d (Daphnia magna; OECD 211) |
| Chronic NOEC for Algae / Aquatic Plants | > 100 mg/l 72h (Desmodesmus subspicatus; OECD 201) |
| HYDROCARBONS, C6, ISOALKANES, <5% N-HEXANE | |
| LC50 - for Fish | 18,27 mg/l/96h (Oncorhynchus mykiss; Q-SAR) |
| EC50 - for Crustacea | 31,9 mg/l/48h (Daphnia magna; Q-SAR) |
| Chronic NOEC for Algae / Aquatic Plants | 3,034 mg/l/48h (Pseudokirchneriella subcapitata; Q-SAR) |
| ACETONE | |
| LC50 - for Fish | 7163 mg/l/96h Pimephales promelas (equivalent or similar to OECD 203) |
| EC50 - for Crustacea | 8800 mg/l/48h Daphnia pulex (Adema, D.M.M. (1978) Hydrobiologia) |
| Chronic NOEC for Algae / Aquatic Plants | 530 mg/l/192h Microcystis aeruginosa (DIN 38412) |
| ROSIN | |
| LC50 - for Fish | 5,4 mg/l/96h Danio rerio (OECD 203) |
| EC50 - for Crustacea | 1,6 mg/l/48h Daphnia magna (OECD 202) |
| EC50 - for Algae / Aquatic Plants | 16,6 mg/l/72h Psudokirchneriella subcapitata (OECD 201) |

**12.2. Persistence and degradability**

| | |
|---|---|
| CYCLOHEXANE | |
| Solubility in water | 52 mg/l 23,5 °C (The Merck Index; O`Neil MJ (Ed.); Merk & Co. Inc., Whitehouse Station, NJ, USA; 2006) |
| Rapidly degradable | 77 % in 28 days (OECD 301 F) |
| ETHYL ACETATE | |
| Solubility in water | 80000 mg/l 25°C (OECD 105) |
| Rapidly degradable | 69% in 20 days (BOD -"Standard methods for the examination of water and waste water 1971") |
| HYDROCARBONS, C6, ISOALKANES, <5% N-HEXANE | |
| Rapidly degradable | 98% in 28 days (Read-across from benzoic acid, sodium salt; OECD 301 F) |

| | |
|---|---|
| ACETONE | |
| Rapidly degradable | 90,2% in 28 days (equivalent or similar to OECD 301 B) |
| ROSIN | |
| Solubility in water | 0,9 mg/l 20°C (OECD 105) |
| Rapidly degradable | 80% in 28 days (OECD 301 B) |

**12.3. Bioaccumulative potential**

| | |
|---|---|
| CYCLOHEXANE | |
| Partition coefficient: n-octanol/water | 3,44 Log Kow (Hansch C. et al, ACS Professional Reference Book, American Chemical Society, 1995) |
| ETHYL ACETATE | |
| Partition coefficient: n-octanol/water | 0,68 Log Kow (EPA OPPTS 830.7560) |
| BCF | 30 - (Environmental hazard profile of organic chemicals; Chemosphere 14, 1589 – 1616; 1985) |
| HYDROCARBONS, C6, ISOALKANES, <5% N-HEXANE | |
| Partition coefficient: n-octanol/water | 3,6 Log Pow 20°C (Read-across from Iso-Hexane; CRC Press, Boca Raton) |
| ACETONE | |
| Partition coefficient: n-octanol/water | -0,23 Log Kow (Lin S.-T et al, nd. Eng. Chem. Res., 1999) |
| BCF | 3 - (value esteemed with EPIWIN v3.20) |
| ROSIN | |
| Partition coefficient: n-octanol/water | > 1,9 Log Pow pH = 2 (OECD 117) |
| BCF | 44,98 L/kgwwt (EPISUITE 4.0) |

**12.4. Mobility in soil**

| | |
|---|---|
| CYCLOHEXANE | |
| Partition coefficient: soil/water | 2,89 Log Koc (QSARs for soil sorption. Overview of Structure-Activity Relat. for Env. Endpoints (RTD Programme) |
| ROSIN | |
| Partition coefficient: soil/water | 3,7289 Log Koc ((Q)SAR: KOCWIN v2.00 QSAR model available from the US EPA) |

**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 ≥ 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. (Directive 2008/98/EC and subsequent amendments and adjustments and related national transpositions).
Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.
The legal responsibility for disposal is the producer / holder of the waste.
To this mixture different EWC codes could be applied (European Waste Code) based on the specific circumstances that generated the waste, possible alterations and / or possible contamination.
The product as such, contained in the original packaging, or decanted in an appropriate container for the purpose of disposal, or no longer usable (for example following an accidental spill), must be classified with a EWC code that is compatible with the description of the use indicated in section 1.2.
The suitable final destination of the waste must be evaluated by the manufacturer on the basis of the chemical-physical characteristics of the waste, the compatibility with the authorized facility to which it will be given for recovery, and the definitive treatment or disposal according to the procedures established by current regulations .
Disposal through wastewater discharge is not permitted.

CONTAMINATED PACKAGING
Contaminated packaging must be sent, properly labeled, to recovery or disposal in compliance with national waste management regulations and must be classified with the following EWC code:

**15 01 10***: packaging containing residues of or contaminated by dangerous substances

## SECTION 14. Transport information

**14.1. UN number or ID number**

ADR / RID, IMDG, IATA: 1133

**14.2. UN proper shipping name**

ADR / RID: ADHESIVES
IMDG: ADHESIVES (CYCLOHEXANE)
IATA: ADHESIVES

**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: II

**14.5. Environmental hazards**

| | |
|---|---|
| ADR / RID: | Environmentally Hazardous |
| IMDG: | Marine Pollutant |
| IATA: | NO |

For Air transport, environmentally hazardous mark is only mandatory for UN 3077 and UN 3082.

**14.6. Special precautions for user**

| | | | |
|---|---|---|---|
| ADR / RID: | HIN - Kemler: 33 | Limited Quantities: 5 L | Tunnel restriction code: (D/E) |
| | Special provision: 640C | | |
| IMDG: | EMS: F-E, S-D | Limited Quantities: 5 L | |
| IATA: | Cargo: | Maximum quantity: 60 L | Packaging instructions: 364 |
| | Pass.: | Maximum quantity: 5 L | Packaging instructions: 353 |
| | Special provision: | A3 | |

**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-E1

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 | 57 | CYCLOHEXANE<br>REACH Reg.: 01-2119463273-41-xxxx |

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors

ACETONE (CAS 67-64-1): ANNEX II - Precursors of regulated explosives.
This product is governed by regulation (EU) 2019/1148: all suspicious transactions and significant disappearances and thefts must be reported to the competent national contact point:

IRELAND
An Garda Síochána (National Police Service)
E-mail: Liaisonandprotection_DV@garda.ie
Tel.: +353 1 6661782 (office hours); or Garda 24hr Confidential Line: 1800 666 111; or 999 or 112 (in the event of a serious or imminent threat)

MALTA
The Malta Police Force
E-mail: pulizija@gov.mt
Tel.: (+356) 2122 4001-9

Substances in Candidate List (Art. 59 REACH)

On the basis of available data, the product does not contain any SVHC in percentage ≥ 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

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

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

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

| | |
|---|---|
| **Flam. Liq. 2** | Flammable liquid, category 2 |
| **Asp. Tox. 1** | Aspiration hazard, category 1 |
| **Eye Irrit. 2** | Eye irritation, category 2 |
| **Skin Irrit. 2** | Skin irritation, category 2 |
| **Skin Sens. 1** | Skin sensitization, category 1 |
| **STOT SE 3** | Specific target organ toxicity - single exposure, category 3 |
| **Aquatic Acute 1** | Hazardous to the aquatic environment, acute toxicity, category 1 |
| **Aquatic Chronic 1** | Hazardous to the aquatic environment, chronic toxicity, category 1 |
| **H225** | Highly flammable liquid and vapour. |
| **H304** | May be fatal if swallowed and enters airways. |
| **H319** | Causes serious eye irritation. |
| **H315** | Causes skin irritation. |
| **H317** | May cause an allergic skin reaction. |
| **H336** | May cause drowsiness or dizziness. |
| **H400** | Very toxic to aquatic life. |
| **H410** | Very toxic to aquatic life with long lasting effects. |

LEGEND:
- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE: Identifier in ESIS (European archive of existing substances)
- CLP: Regulation (EC) 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: Regulation (EC) 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA: Time-weighted average exposure limit
- TWA STEL: Short-term exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY

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

18. Delegated Regulation (UE) 2020/217 (XIV Atp. CLP)
19. Delegated Regulation (UE) 2020/1182 (XV Atp. CLP)
20. Delegated Regulation (UE) 2021/643 (XVI Atp. CLP)
21. Delegated Regulation (UE) 2021/849 (XVII Atp. CLP)
- The Merck Index. - 10th Edition
- Handling Chemical Safety
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- IFA GESTIS website
- ECHA website
- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy


**NOTE FOR THE RECIPIENT OF THE SAFETY DATA SHEET (SDS):**
The recipient of this SDS shall make sure of reading and understanding the information included by all people who handle, store, use, or otherwise come into contact in any way with the substance or mixture to which this SDS is referred to. In particular, the recipient shall provide adequate training to the personnel for the use of hazardous substances and/or mixtures. The recipient shall verify the suitability and completeness of the provided information according to the specific use of the substance or mixture.
However, the substance or mixture referred to by this SDS shall not be used for uses other than those specified in Section 1. The Supplier don't assume responsibility for improper uses. Since the use of the product does not fall under the direct control of the Supplier, the user shall, under his own responsibility, fulfill national and EU regulations concerning health and safety.
The information included in this SDS are provided in good faith and are based on the current state of scientific and technical knowledge, at the revision date indicated, available to the Supplier indicated in Section 1 of this SDS. It shall not be meant that the SDS is a guarantee of any specific property of the substance or mixture. The information concern only to the substance or mixture specifically designated in Section 1 and it could not be valid for the substance or mixture used in combination with other materials or in any process not specified in the text.

This version of the SDS substitutes all the previous versions.

Changes to previous review:
The following sections were modified:
01 / 02 / 03 / 04 / 08 / 09 / 11 / 12 / 14 / 15 / 16.