# 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 **PLT 1: 10 GL, 11 GS, 12 AR, 21 RS, 22 RC, 25 MG, 27 VT, 32 BL, 40 VR, 65 NR, 70 TR,**

UFI : **27M2-R0DN-5006-EN9D**

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

Intended use **Pad printing ink**

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

Name **COMEC ITALIA SRL**

Full address **Piazzale del lavoro 149**

District and Country **21044 Cavaria (VA)**
**ITALIA**

**Tel. +39 0331 219516**

**Fax +39 0331 216161**

e-mail address of the competent person responsible for the Safety Data Sheet **info@comec-italia.it**

Supplier: **Edgardo Baggini**

**1.4. Emergency telephone number**

For urgent inquiries refer to **CENTRO ANTIVELENI OSPEDALE NIGUARDA MILANO Tel. 02/66101029 (24/24h) - CENTRO ANTIVELENI POLICLINICO A.GEMELL ROMA Tel. 06/3054343 (24/24h) -**

## SECTION 2. Hazards identification

**2.1. Classification of the substance or mixture**

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

Hazard classification and indication:

| | | |
|---|---|---|
| Flammable liquid, category 3 | H226 | Flammable liquid and vapour. |
| Aspiration hazard, category 1 | H304 | May be fatal if swallowed and enters airways. |
| Serious eye damage, category 1 | H318 | Causes serious eye damage. |
| Skin irritation, category 2 | H315 | Causes skin irritation. |
| Hazardous to the aquatic environment, chronic toxicity, category 3 | H412 | Harmful to aquatic life with long lasting effects. |

**2.2. Label elements**

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

Hazard pictograms:

Signal words: Danger

Hazard statements:

| | |
| --- | --- |
| **H226** | Flammable liquid and vapour. |
| **H304** | May be fatal if swallowed and enters airways. |
| **H318** | Causes serious eye damage. |
| **H315** | Causes skin irritation. |
| **H412** | Harmful 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. |
| **P331** | Do NOT induce vomiting. |
| **P305+P351+P338** | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| **P280** | Wear protective gloves/ protective clothing / eye protection / face protection. |
| **P310** | Immediately call a POISON CENTER or a doctor. |
| **P370+P378** | In case of fire: use chemical powder, CO2 or dry send to extinguish. |

**Contains:** AROMATIC HYDROCARBONS, C9
CYCLOHEXANONE

**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)** |
| --- | --- | --- |
| **CYCLOHEXANONE** | | |
| INDEX 606-010-00-7<br>EC 203-631-1<br>CAS 108-94-1<br>REACH Reg. 01-2119453616-35- | 15 ≤ x < 16,5 | Flam. Liq. 3 H226, Acute Tox. 4 H302, Acute Tox. 4 H312, Acute Tox. 4 H332, Eye Dam. 1 H318, Skin Irrit. 2 H315<br>LD50 Oral: 1535 mg/kg, LD50 Dermal: 1100 mg/kg, LC50 Inhalation vapours: 11 mg/l/4h |

xxxx

| | | |
|---|---|---|
| **4-HYDROXY-4-METHYLPENTAN-2-ONE** | | |
| INDEX 603-016-00-1 | 15 ≤ x < 16,5 | Flam. Liq. 3 H226, Eye Irrit. 2 H319 |
| EC 204-626-7 | | |
| CAS 123-42-2 | | |
| REACH Reg. 01-2119473975-21xxxx | | |
| **Acrylate resin** | | |
| INDEX | 10,5 ≤ x < 12 | Eye Irrit. 2 H319, Skin Irrit. 2 H315 |
| EC | | |
| CAS - | | |
| **AROMATIC HYDROCARBONS, C9** | | |
| INDEX - | 10,5 ≤ x < 12 | Flam. Liq. 3 H226, Asp. Tox. 1 H304, STOT SE 3 H335, STOT SE 3 H336, Aquatic Chronic 2 H411, EUH066, Classification note according to Annex VI to the CLP Regulation: P |
| EC 918-668-5 | | |
| CAS - | | |
| REACH Reg. 01-2119455851-35-xxxx | | |
| **BUTYLGLYCOL ACETATE** | | |
| INDEX 607-038-00-2 | 8 ≤ x < 9 | Acute Tox. 4 H302, Acute Tox. 4 H312, Acute Tox. 4 H332 |
| EC 203-933-3 | | LD50 Oral: 1880 mg/kg, LD50 Dermal: 1500 mg/kg, STA Inhalation vapours: 11 mg/l |
| CAS 112-07-2 | | |
| REACH Reg. 01-2119475112-47xxxx | | |
| **2-METHOXY-1-METHYLETHYL ACETATE** | | |
| INDEX 607-195-00-7 | 1 ≤ x < 1,5 | Flam. Liq. 3 H226, STOT SE 3 H336 |
| EC 203-603-9 | | |
| CAS 108-65-6 | | |
| REACH Reg. 01-2119475791-29-xxxx | | |
| **N-BUTYL ACETATE** | | |
| INDEX 607-025-00-1 | 0,29 ≤ x < 0,31 | Flam. Liq. 3 H226, STOT SE 3 H336, EUH066 |
| EC 204-658-1 | | |
| CAS 123-86-4 | | |
| REACH Reg. 01-2119485493-29-xxxx | | |

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.

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

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

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

Information not available

## SECTION 5. Firefighting measures

**5.1. Extinguishing media**

SUITABLE EXTINGUISHING EQUIPMENT
Extinguishing substances are: carbon dioxide, foam, chemical powder. For product loss or leakage that has not caught fire, water spray can be used to disperse flammable vapours and protect those trying to stem the leak.
UNSUITABLE EXTINGUISHING EQUIPMENT
Do not use jets of water. Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.

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

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE
Excess pressure may form in containers exposed to fire at a risk of explosion. Do not breathe combustion products.

**5.3. Advice for firefighters**

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

## SECTION 6. Accidental release measures

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

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

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

**6.2. Environmental precautions**

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

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

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder

with inert absorbent material.
Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

**6.4. Reference to other sections**

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

## SECTION 7. Handling and storage

**7.1. Precautions for safe handling**

Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Without adequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat. Avoid leakage of the product into the environment.

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

Store only in the original container. 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)**

Information not available

## SECTION 8. Exposure controls/personal protection

**8.1. Control parameters**

Regulatory References:

| | | |
|---|---|---|
| BGR | България | НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г. ЗА ЗАЩИТА НА РАБОТЕЩИТЕ ОТ РИСКОВЕ, СВЪРЗАНИ С ЕКСПОЗИЦИЯ НА ХИМИЧНИ АГЕНТИ ПРИ РАБОТА (изм. ДВ. бр.5 от 17 Януари 2020г.) |
| 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 |
| DNK | Danmark | Bekendtgørelse om grænseværdier for stoffer og materialer - BEK nr 1458 af 13/12/2019 |
| 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 |
| 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 |
| ROU | România | Hotărârea nr. 53/2021 pentru modificarea hotărârii guvernului nr. 1.218/2006, precum și pentru modificarea și completarea hotărârii guvernului nr. 1.093/2006 |
| SWE | Sverige | Hygieniska gränsvärden, Arbetsmiljöverkets föreskrifter och allmänna råd om hygieniska gränsvärden (AFS 2018:1) |
| TUR | Türkiye | Kimyasal Maddelerle Çalışmalarda Sağlık ve Güvenlik Önlemleri Hakkında Yönetmelik 12.08.2013 / 28733 |
| 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

**CYCLOHEXANONE**

**Threshold Limit Value**

| Type | Country | TWA/8h | | STEL/15min | | Remarks / Observations | |
|---|---|---|---|---|---|---|---|
| | | mg/m3 | ppm | mg/m3 | ppm | | |
| TLV | BGR | 40,8 | 10 | 81,6 | 20 | SKIN | |
| TLV | CZE | 40 | 9,8 | 80 | 196 | SKIN | |
| AGW | DEU | 80 | 20 | 80 | 20 | SKIN | |
| TLV | DNK | 41 | 10 | | | SKIN | E |
| VLA | ESP | 41 | 10 | 82 | 20 | SKIN | |
| VLEP | FRA | 40,8 | 10 | 81,6 | 20 | | |
| VLEP | ITA | 40,8 | 10 | 81,6 | 20 | SKIN | |
| TGG | NLD | | | 50 | | SKIN | |
| VLE | PRT | 40,8 | 10 | 81,6 | 20 | SKIN | |
| NDS/NDSCh | POL | 40 | | 80 | | SKIN | |
| TLV | ROU | 40,8 | 10 | 81,6 | 20 | SKIN | |
| NGV/KGV | SWE | 41 | 10 | 81 | 20 | SKIN | |
| ESD | TUR | 40,8 | 10 | 81,6 | 20 | SKIN | |
| WEL | GBR | 41 | 10 | 82 | 20 | SKIN | |
| OEL | EU | 40,8 | 10 | 81,6 | 20 | SKIN | |
| TLV-ACGIH | | 80 | 20 | 201 | 50 | SKIN | |

| Predicted no-effect concentration - PNEC | | |
|---|---|---|
| Normal value in fresh water | 0,1 | mg/l |
| Normal value in marine water | 0,01 | mg/l |
| Normal value for fresh water sediment | 0,512 | mg/kg |
| Normal value for marine water sediment | 0,0512 | mg/kg |
| Normal value for water, intermittent release | 0,329 | mg/l |
| Normal value of STP microorganisms | 10 | mg/l |
| Normal value for the terrestrial compartment | 0,0435 | mg/kg |

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

| | Effects on consumers | | | | Effects on workers | | | |
|---|---|---|---|---|---|---|---|---|
| Route of exposure | Acute local | Acute systemic | Chronic local | Chronic systemic | Acute local | Acute systemic | Chronic local | Chronic systemic |
| Oral | | | | 1,5 mg/kg bw/d | | | | |
| Inhalation | | | VND | 10 mg/m3 | | | VND | 40 mg/m3 |
| Skin | | | VND | 1 mg/kg bw/d | | | VND | 4 mg/kg bw/d |

**4-HYDROXY-4-METHYLPENTAN-2-ONE**

**Threshold Limit Value**

| Type | Country | TWA/8h | | STEL/15min | | Remarks / Observations |
|---|---|---|---|---|---|---|
| | | mg/m3 | ppm | mg/m3 | ppm | |
| TLV | CZE | 200 | 41,4 | 300 | 62,1 | |
| AGW | DEU | 96 | 20 | 192 | 40 | SKIN |

| | | | | | | |
|---|---|---|---|---|---|---|
| MAK | DEU | 96 | 20 | 192 | 40 | SKIN |
| TLV | DNK | 240 | 50 | | | |
| VLA | ESP | 241 | 50 | | | |
| VLEP | FRA | 240 | 50 | | | |
| TGG | NLD | 120 | | | | SKIN |
| NDS/NDSCh | POL | 240 | | | | |
| TLV | ROU | 150 | 32 | 250 | 53 | |
| NGV/KGV | SWE | 120 | 25 | 240 (C) | 50 (C) | |
| WEL | GBR | 241 | 50 | 362 | 75 | |
| TLV-ACGIH | | 238 | 50 | | | |

| Predicted no-effect concentration - PNEC | | |
|---|---|---|
| Normal value in fresh water | 2 | mg/l |
| Normal value in marine water | 0,2 | mg/l |
| Normal value for fresh water sediment | 9,06 | mg/kg |
| Normal value for marine water sediment | 0,91 | mg/kg |
| Normal value for water, intermittent release | 1 | mg/l |
| Normal value of STP microorganisms | 82 | mg/l |
| Normal value for the terrestrial compartment | 0,63 | mg/kg |

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

| | Effects on consumers | | | | Effects on workers | | | |
|---|---|---|---|---|---|---|---|---|
| Route of exposure | Acute local | Acute systemic | Chronic local | Chronic systemic | Acute local | Acute systemic | Chronic local | Chronic systemic |
| Oral | | | | 3,4 mg/kg | | | | |
| Inhalation | | | | 11,8 mg/m3 | | | | 66,4 mg/m3 |
| Skin | | | | 3,4 mg/kg | | | | 9,4 mg/kg |

**DIMETHYL ADIPATE, DIMETHYL GLUTARATE, DIMETHYL SUCCINATE, REACTION MASS**

| Predicted no-effect concentration - PNEC | | |
|---|---|---|
| Normal value in fresh water | 0,018 | mg/l |
| Normal value in marine water | 0,002 | mg/l |
| Normal value for fresh water sediment | 0,16 | mg/kg/d |
| Normal value for marine water sediment | 0,016 | mg/kg/d |
| Normal value for water, intermittent release | 0,18 | mg/l |
| Normal value of STP microorganisms | 10 | mg/l |
| Normal value for the terrestrial compartment | 0,09 | mg/kg/d |

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

| | Effects on consumers | | | | Effects on workers | | | |
|---|---|---|---|---|---|---|---|---|
| Route of exposure | Acute local | Acute systemic | Chronic local | Chronic systemic | Acute local | Acute systemic | Chronic local | Chronic systemic |
| Inhalation | | | 5 mg/m3 | VND | | | 8,3 mg/m3 | VND |

**AROMATIC HYDROCARBONS, C9**

**Threshold Limit Value**

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

| | | | | |
|---|---|---|---|---|
| VLEP | ITA | 100 | 20 | 1,2,3 trimetilbenzene |
| OEL | EU | 100 | 20 | 1,2,3 trimetilbenzene |
| TLV-ACGIH | | | 25 | 1,2,3 trimetilbenzene |

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

| | Effects on consumers | | | | Effects on workers | | | |
|---|---|---|---|---|---|---|---|---|
| Route of exposure | Acute local | Acute systemic | Chronic local | Chronic systemic | Acute local | Acute systemic | Chronic local | Chronic systemic |
| Oral | | | VND | 11 mg/kg | | | | 11 mg/kg bw/d |
| Inhalation | | | VND | 32 mg/m3 | | | VND | 150 mg/m3 |
| Skin | | | VND | 11 mg/kg | | | VND | 25 mg/kg |

**BUTYLGLYCOL ACETATE**

**Threshold Limit Value**

| Type | Country | TWA/8h | | STEL/15min | | Remarks / Observations | |
|---|---|---|---|---|---|---|---|
| | | mg/m3 | ppm | mg/m3 | ppm | | |
| TLV | BGR | 133 | 20 | 333 | 50 | SKIN | |
| TLV | CZE | 130 | 19,5 | 300 | 45 | SKIN | |
| AGW | DEU | 65 | 10 | 130 (C) | 20 (C) | SKIN | 11 |
| MAK | DEU | 66 | 10 | 132 | 20 | SKIN | Hinweis |
| TLV | DNK | 134 | 20 | | | SKIN | E |
| VLA | ESP | 133 | 20 | 333 | 50 | SKIN | |
| VLEP | FRA | 66,5 | 10 | 333 | 50 | | |
| VLEP | ITA | 133 | 20 | 333 | 50 | SKIN | |
| TGG | NLD | 135 | | 333 | | SKIN | |
| VLE | PRT | 133 | 20 | 333 | 50 | SKIN | |
| NDS/NDSCh | POL | 100 | | 300 | | SKIN | |
| TLV | ROU | 133 | 20 | 333 | 50 | SKIN | |
| NGV/KGV | SWE | 70 | 10 | 333 | 50 | SKIN | |
| ESD | TUR | 133 | 20 | 333 | 50 | SKIN | |
| WEL | GBR | 133 | 20 | 332 | 50 | SKIN | |
| OEL | EU | 133 | 20 | 333 | 50 | SKIN | |
| TLV-ACGIH | | 131 | 20 | | | | |

| Predicted no-effect concentration - PNEC | | |
|---|---|---|
| Normal value in fresh water | 0,304 | mg/l |
| Normal value in marine water | 0,03 | mg/l |
| Normal value for fresh water sediment | 2,03 | mg/l |
| Normal value for marine water sediment | 0,203 | mg/l |
| Normal value for water, intermittent release | 0,56 | mg/l |
| Normal value of STP microorganisms | 90 | mg/l |
| Normal value for the food chain (secondary poisoning) | 60 | mg/kg |
| Normal value for the terrestrial compartment | 0,415 | mg/kg/d |

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

| | Effects on consumers | | | | Effects on workers | | | |
|---|---|---|---|---|---|---|---|---|
| Route of exposure | Acute local | Acute systemic | Chronic local | Chronic systemic | Acute local | Acute systemic | Chronic local | Chronic systemic |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Oral | VND | 36 mg/kg/d | VND | 4,3 mg/kg/d | | | | |
| Inhalation | 200 mg/m3 | 499 mg/m3 | VND | 80 mg/m3 | 333 mg/m3 | 773 mg/m3 | VND | 133 mg/m3 |
| Skin | | 72 mg/kg bw/d | VND | 102 mg/kg/d | 102 mg/kg/d | 27 mg/kg/d | VND | 169 mg/kg/d |

**HYDROM HYDROPHONE SILICATE**

**Threshold Limit Value**

| Type | Country | TWA/8h | | STEL/15min | | Remarks / Observations |
|---|---|---|---|---|---|---|
| | | mg/m3 | ppm | mg/m3 | ppm | |
| AGW | DEU | 4 | | | | INHAL |
| MAK | DEU | 4 | | | | INHAL |

**Soybean oil, epoxidized**

**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 | | 5 mg/kg/d | | 0,8 mg/kg/d | | | | |
| Inhalation | | 17,5 mg/m3 | | 2,8 mg/m3 | | 70 mg/m3 | | 11,9 mg/m3 |
| Skin | | 5 mg/kg/d | | 0,8 mg/kg/d | 10 mg/kg/d | 10 mg/kg/d | | 1,7 mg/kg/d |

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

**Threshold Limit Value**

| Type | Country | TWA/8h | | STEL/15min | | Remarks / Observations | |
|---|---|---|---|---|---|---|---|
| | | mg/m3 | ppm | mg/m3 | ppm | | |
| TLV | BGR | 275 | 50 | 550 | 100 | SKIN | |
| TLV | CZE | 270 | 49,14 | 550 | 100,1 | SKIN | |
| AGW | DEU | 270 | 50 | 270 | 50 | | |
| MAK | DEU | 270 | 50 | 270 | 50 | | |
| TLV | DNK | 275 | 50 | | | SKIN | E |
| VLA | ESP | 275 | 50 | 550 | 100 | SKIN | |
| VLEP | FRA | 275 | 50 | 550 | 100 | SKIN | |
| VLEP | ITA | 275 | 50 | 550 | 100 | SKIN | |
| TGG | NLD | 550 | | | | | |
| VLE | PRT | 275 | 50 | 550 | 100 | SKIN | |
| NDS/NDSCh | POL | 260 | | 520 | | SKIN | |
| TLV | ROU | 275 | 50 | 550 | 100 | SKIN | |
| NGV/KGV | SWE | 275 | 50 | 550 | 100 | SKIN | |
| ESD | TUR | 275 | 50 | 550 | 100 | SKIN | |
| WEL | GBR | 274 | 50 | 548 | 100 | SKIN | |
| OEL | EU | 275 | 50 | 550 | 100 | SKIN | |

| Predicted no-effect concentration - PNEC | | |
|---|---|---|
| Normal value in fresh water | 0,635 | mg/l |
| Normal value in marine water | 0,0635 | mg/l |
| Normal value for fresh water sediment | 3,29 | mg/kg |
| Normal value for marine water sediment | 0,329 | mg/l |

| | | |
|---|---|---|
| Normal value for water, intermittent release | 6,35 | mg/l |
| Normal value of STP microorganisms | 100 | mg/l |
| Normal value for the terrestrial compartment | 0,29 | mg/kg |

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

| | Effects on consumers | | | | Effects on workers | | | |
|---|---|---|---|---|---|---|---|---|
| Route of exposure | Acute local | Acute systemic | Chronic local | Chronic systemic | Acute local | Acute systemic | Chronic local | Chronic systemic |
| Oral | | | VND | 1,67 mg/kg | | | | |
| Inhalation | | | 33 mg/m3 | 33 mg/m3 | 550 mg/m3 | | VND | 275 mg/m3 |
| Skin | | | VND | 54,8 mg/kg | | | VND | 153,5 mg/kg |

**reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate**

| Predicted no-effect concentration - PNEC | | |
|---|---|---|
| Normal value in fresh water | 0,018 | mg/l |
| Normal value in marine water | 0,0018 | mg/l |
| Normal value for fresh water sediment | 2 | mg/kg/d |
| Normal value for marine water sediment | 0,2 | mg/kg/d |
| Normal value for water, intermittent release | 0,018 | mg/l |
| Normal value of STP microorganisms | 100 | mg/l |
| Normal value for the food chain (secondary poisoning) | 41,33 | mg/kg |
| Normal value for the terrestrial compartment | 10 | mg/kg/d |

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

| | Effects on consumers | | | | Effects on workers | | | |
|---|---|---|---|---|---|---|---|---|
| Route of exposure | Acute local | Acute systemic | Chronic local | Chronic systemic | Acute local | Acute systemic | Chronic local | Chronic systemic |
| Oral | | | | 0,93 mg/kg bw/d | | | | |
| Inhalation | | | | 1,62 mg/m3 | | | | 6,6 mg/m3 |
| Skin | | | | 0,83 mg/kg bw/d | | | | 1,67 mg/kg bw/d |

**N-BUTYL ACETATE**

**Threshold Limit Value**

| Type | Country | TWA/8h | | STEL/15min | | Remarks / Observations |
|---|---|---|---|---|---|---|
| | | mg/m3 | ppm | mg/m3 | ppm | |
| TLV | BGR | 710 | | 950 | | |
| TLV | CZE | 950 | 196,65 | 1200 | 248,4 | |
| AGW | DEU | 300 | 62 | 600 (C) | 124 (C) | |
| TLV | DNK | 710 | 150 | | | |
| VLA | ESP | 241 | 50 | 724 | 150 | |
| VLEP | FRA | 710 | 150 | 940 | 200 | |
| VLEP | ITA | 241 | 50 | 723 | 150 | |
| TGG | NLD | 150 | | | | |
| VLE | PRT | 241 | 50 | 723 | 150 | |
| NDS/NDSCh | POL | 240 | | 720 | | |
| TLV | ROU | 241 | 50 | 723 | 150 | |

| | | | | | |
|---|---|---|---|---|---|
| NGV/KGV | SWE | 241 | 50 | 723 (C) | 150 (C) |
| WEL | GBR | 724 | 150 | 966 | 200 |
| OEL | EU | 241 | 50 | 723 | 150 |
| TLV-ACGIH | | | 50 | | 150 |

| Predicted no-effect concentration - PNEC | | |
|---|---|---|
| Normal value in fresh water | 0,18 | mg/l |
| Normal value in marine water | 0,01 | mg/l |
| Normal value for fresh water sediment | 0,98 | mg/kg |
| Normal value for marine water sediment | 0,09 | mg/kg |
| Normal value for water, intermittent release | 0,36 | mg/l |
| Normal value of STP microorganisms | 35,6 | mg/l |
| Normal value for the terrestrial compartment | 0,09 | mg/kg |

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

| | Effects on consumers | | | | Effects on workers | | | |
|---|---|---|---|---|---|---|---|---|
| Route of exposure | Acute local | Acute systemic | Chronic local | Chronic systemic | Acute local | Acute systemic | Chronic local | Chronic systemic |
| Inhalation | 859,7 mg/m3 | 895,7 mg/m3 | 102,34 mg/m3 | 102,34 mg/m3 | 960 mg/m3 | 960 mg/m3 | 480 mg/m3 | 480 mg/m3 |

**BUTANOL**

**Threshold Limit Value**

| Type | Country | TWA/8h | | STEL/15min | | Remarks / Observations |
|---|---|---|---|---|---|---|
| | | mg/m3 | ppm | mg/m3 | ppm | |
| TLV | BGR | 100 | | 150 | | |
| TLV | CZE | 300 | 97,5 | 600 | 195 | |
| AGW | DEU | 310 | 100 | 310 | 100 | |
| MAK | DEU | 310 | 100 | 310 | 100 | |
| TLV | DNK | | | 150 (C) | 50 (C) | SKIN |
| VLA | ESP | 61 | 20 | 154 | 50 | |
| VLEP | FRA | | | 150 | 50 | |
| TGG | NLD | | | 45 | | |
| NDS/NDSCh | POL | 50 | | 150 | | SKIN |
| TLV | ROU | 100 | 33 | 200 | 66 | |
| NGV/KGV | SWE | 45 | 15 | 90 | 30 | SKIN |
| WEL | GBR | | | 154 | 50 | SKIN |
| TLV-ACGIH | | 61 | 20 | | | |

| Predicted no-effect concentration - PNEC | | |
|---|---|---|
| Normal value in fresh water | 0,082 | mg/l |
| Normal value in marine water | 0,0082 | mg/l |
| Normal value for fresh water sediment | 0,178 | mg/kg |
| Normal value for marine water sediment | 0,0178 | mg/kg |
| Normal value for water, intermittent release | 2,25 | mg/l |
| Normal value of STP microorganisms | 2476 | mg/l |
| Normal value for the terrestrial compartment | 0,015 | mg/kg |

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

| | Effects on consumers | | | | Effects on workers | | | |
|---|---|---|---|---|---|---|---|---|
| Route of exposure | Acute local | Acute systemic | Chronic local | Chronic systemic | Acute local | Acute systemic | Chronic local | Chronic systemic |
| Oral | | | VND | 3125 mg/kg | | | | |
| Inhalation | | | 55 mg/m3 | VND | | | 310 mg/m3 | VND |

Legend:

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

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

**8.2. Exposure controls**

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

Provide an emergency shower with face and eye wash station.

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, use a mask with a type A filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.
Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.
If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

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

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

## SECTION 9. Physical and chemical properties

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

| Properties | Value | Information |
|---|---|---|
| Appearance | liquid | |
| Colour | various | |
| Odour | typical of solvent | |
| Melting point / freezing point | not available | |
| Initial boiling point | not available | |
| Flammability | not available | |
| Lower explosive limit | not available | |
| Upper explosive limit | not available | |
| Flash point | 23 ≤ T ≤ 60 °C | |
| Auto-ignition temperature | not available | |
| Decomposition temperature | not available | |
| pH | not available | |
| Kinematic viscosity | not available | |
| Solubility | not available | |
| 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

Information not available

## SECTION 10. Stability and reactivity

**10.1. Reactivity**

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

CYCLOHEXANONE

Attacks various types of plastic materials.

May condense under the effect of heat to form resinous compounds.

4-HYDROXY-4-METHYLPENTAN-2-ONE

Decomposes at temperatures above 90°C/194°F.

2-METHOXY-1-METHYLETHYL ACETATE

Stable in normal conditions of use and storage.

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

N-BUTYL ACETATE

Decomposes on contact with: water.

**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.

CYCLOHEXANONE

Risk of explosion on contact with: hydrogen peroxide,nitric acid,heat,mineral acids.May react violently with: oxidising agents.Forms explosive mixtures with: air.

4-HYDROXY-4-METHYLPENTAN-2-ONE

Risk of explosion on contact with: air,sources of heat.May react dangerously with: alkaline metals,amines,oxidising agents,acids.

2-METHOXY-1-METHYLETHYL ACETATE

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

N-BUTYL ACETATE

Risk of explosion on contact with: strong oxidising agents.May react dangerously with: alkaline hydroxides,potassium tert-butoxide.Forms explosive mixtures with: air.

**10.4. Conditions to avoid**

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

CYCLOHEXANONE

Avoid exposure to: sources of heat,naked flames.

4-HYDROXY-4-METHYLPENTAN-2-ONE

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

N-BUTYL ACETATE

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

**10.5. Incompatible materials**

2-METHOXY-1-METHYLETHYL ACETATE

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

N-BUTYL ACETATE

Incompatible with: water,nitrates,strong oxidants,acids,alkalis,zinc.

**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.

## 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

2-METHOXY-1-METHYLETHYL ACETATE
The main route of entry is the skin, whereas the respiratory route is less important due to the low vapour pressure of the product.

Information on likely routes of exposure

4-HYDROXY-4-METHYLPENTAN-2-ONE
WORKERS: inhalation; contact with the skin.

2-METHOXY-1-METHYLETHYL ACETATE
WORKERS: inhalation; contact with the skin.

N-BUTYL ACETATE
WORKERS: inhalation; contact with the skin.

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

4-HYDROXY-4-METHYLPENTAN-2-ONE
Acute toxicity causes irritation of the eyes, nose and throat in humans at 100 ppm (476 mg/kg) and pulmonary disorders at 400 ppm. No chronic effects on humans have been reported. The substance may have a depressive effect on the respiratory centres and cause death from respiratory failure.

2-METHOXY-1-METHYLETHYL ACETATE
Above 100 ppm causes irritation of the eye, nose and oropharynx mucous membranes. At 1000 ppm, disturbance of equilibrium and severe eye irritation can be noticed. Clinical and biological examinations carried out on exposed volunteers revealed no anomalies. Acetate produces greater skin and eye irritation with direct contact. No chronic effects on humans have been reported (INCR, 2010).

N-BUTYL ACETATE
In humans, the substance's vapours cause irritation of the eyes and nose. In the event of repeated exposure, skin irritation, dermatitis (dryness and cracking of the skin) and keratitis appear.

Interactive effects

N-BUTYL ACETATE
A case of acute intoxication been reported involving a 33 year old worker while cleaning a tank with a preparation containing xylenes, butyl acetate and ethylene glycol acetate. The person had irritation of the conjunctiva and upper respiratory tract, drowsiness and motor coordination disorders, which disappeared within 5 hours. The symptoms are attributed to poisoning by mixed xylenes and butyl acetate, with a possible synergistic effect responsible for the neurological effects. Cases of vacuolar keratitis are reported in workers exposed to a mixture of butyl acetate and isobutanol vapours, but with uncertainty concerning the responsibility of a particular solvent (INRC, 2011).

ACUTE TOXICITY

| | |
|---|---|
| ATE (Inhalation - vapours) of the mixture: | > 20 mg/l |
| ATE (Oral) of the mixture: | >2000 mg/kg |
| ATE (Dermal) of the mixture: | >2000 mg/kg |

CYCLOHEXANONE

| | |
|---|---|
| LD50 (Dermal): | 1100 mg/kg 794 - 3160 / Coniglio / Rabbit |
| LD50 (Oral): | 1535 mg/kg Ratto / Rat |
| LC50 (Inhalation vapours): | 11 mg/l/4h Ratto / Rat (4h) |

4-HYDROXY-4-METHYLPENTAN-2-ONE

| | |
|---|---|
| LD50 (Dermal): | > 1875 mg/kg Ratto / Rat |
| LD50 (Oral): | 3002 mg/kg Rat |
| LC50 (Inhalation vapours): | > 7,6 mg/l Ratto / Rat |

DIMETHYL ADIPATE, DIMETHYL GLUTARATE, DIMETHYL SUCCINATE, REACTION MASS

| | |
|---|---|
| LD50 (Dermal): | > 2000 mg/kg Rat |
| LD50 (Oral): | > 5000 mg/kg Rat |
| LC50 (Inhalation vapours): | > 11 mg/l Rat (4h) |

AROMATIC HYDROCARBONS, C9

| | |
|---|---|
| LD50 (Dermal): | > 3160 mg/kg Ratto / Rat |
| LD50 (Oral): | 3492 mg/kg Ratto / Rat |
| LC50 (Inhalation vapours): | > 6193 mg/l/4h Ratto / Rat |

BUTYLGLYCOL ACETATE

| | |
|---|---|
| LD50 (Dermal): | 1500 mg/kg Coniglio / Rabbit |
| LD50 (Oral): | 1880 mg/kg Ratto / Rat |
| LC50 (Inhalation vapours): | 0,4 mg/l/4h Ratto - Rat |
| STA (Inhalation vapours): | 11 mg/l estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture) |

HYDROM HYDROPHONE SILICATE

| | |
|---|---|
| LD50 (Dermal): | > 5000 mg/kg Rat |
| LD50 (Oral): | > 3300 mg/kg Ratto / Rat - Nessuna mortalità |
| LC50 (Inhalation mists/powders): | > 0,139 mg/l/1h Ratto / Rat - Nessuna mortalità - Conc. massima raggiungibile |

Soybean oil, epoxidized

| | |
|---|---|
| LD50 (Dermal): | > 20 ml/kg Coniglio / Rabbit |
| LD50 (Oral): | > 5000 mg/kg Ratto / Rat |

Tillplast ATBC

| | |
|---|---|
| LD50 (Oral): | 31400 mg/kg Ratto - Rat |

2-METHOXY-1-METHYLETHYL ACETATE

| | |
|---|---|
| LD50 (Dermal): | > 5000 mg/kg Coniglio / Rabbit |
| LD50 (Oral): | 8500 mg/kg Ratto / Rat |
| LC50 (Inhalation vapours): | 4345 ppm/6h Ratto / Rat |

N-BUTYL ACETATE

| | |
|---|---|
| LD50 (Dermal): | > 14000 mg/kg Rabbit |
| LD50 (Oral): | > 10000 mg/kg Rat |
| LC50 (Inhalation vapours): | > 21 mg/l/4h Rat |

SKIN CORROSION / IRRITATION

Causes skin irritation

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye damage

RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

ASPIRATION HAZARD

Toxic for aspiration

**11.2. Information on other hazards**

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

## SECTION 12. Ecological information

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

**12.1. Toxicity**

| | |
|---|---|
| Soybean oil, epoxidized | |
| LC50 - for Fish | 900 mg/l/48h 48h - Leuciscus idus melanotus |
| EC50 - for Crustacea | > 100 mg/l/24h 24h - Daphnia magna |
| EC50 - for Algae / Aquatic Plants | 8 mg/l/72h Scenedsmus subspicatus |
| Tillplast ATBC | |
| LC50 - for Fish | > 38 mg/l/96h |
| AROMATIC HYDROCARBONS, C9 | |
| LC50 - for Fish | > 9,2 mg/l/96h Oncorhynchus mykiss |
| EC50 - for Crustacea | > 3,2 mg/l/48h Daphnia magna |
| EC50 - for Algae / Aquatic Plants | > 2,9 mg/l/72h Pseudokirchneriella subcapitata |
| HYDROM HYDROPHONE SILICATE | |
| LC50 - for Fish | > 10000 mg/l/96h Brachyadanio rerio |
| EC50 - for Crustacea | > 1000 mg/l/24h 24h - Daphnia magna |
| 2-METHOXY-1-METHYLETHYL ACETATE | |
| LC50 - for Fish | 134 mg/l/96h Pesce, Oncorhynchus mykiss OECD 203 |
| EC50 - for Crustacea | > 500 mg/l/48h Daphnia magna |
| EC50 - for Algae / Aquatic Plants | > 1000 mg/l/72h Selenastrum capricornutum OECD 201 |
| Chronic NOEC for Fish | 47,5 mg/l Oryzias latipes 14 gg OECD 204 |
| Chronic NOEC for Crustacea | 100 mg/l Dapnia magna 21 gg OECD 202 |
| 4-HYDROXY-4-METHYLPENTAN-2-ONE | |
| LC50 - for Fish | > 100 mg/l/96h Oryzias latipes |
| EC50 - for Crustacea | > 1000 mg/l/48h Daphnia magna |
| EC50 - for Algae / Aquatic Plants | < 1000 mg/l/72h Pseudokirchneriella subcapitata |
| CYCLOHEXANONE | |
| LC50 - for Fish | 527 mg/l/96h 527 - 732 / Pimephales promelas |
| EC50 - for Crustacea | > 100 mg/l/48h Daphnia magna |
| EC50 - for Algae / Aquatic Plants | > 100 mg/l/72h Scenedesmus subspicatus |
| N-BUTYL ACETATE | |
| LC50 - for Fish | 18 mg/l/96h Pimephales promelas |
| EC50 - for Crustacea | 44 mg/l/48h Daphnia Magna |
| EC10 for Algae / Aquatic Plants | 674,7 mg/l/72h Desmodesmus subspicatus |
| Chronic NOEC for Crustacea | 23 mg/l 21d/ Daphnia magna |
| BUTYLGLYCOL ACETATE | |
| LC50 - for Fish | > 20 mg/l/96h Fish 20-40 mg/kg (48h) |

| | |
|---|---|
| EC50 - for Crustacea | 145 mg/l/24h Daphnia Magna (24h) |
| EC50 - for Algae / Aquatic Plants | 1570 mg/l/72h Scenedesmus subspicatus |

DIMETHYL ADIPATE, DIMETHYL GLUTARATE, DIMETHYL SUCCINATE, REACTION MASS

| | |
|---|---|
| LC50 - for Fish | 0,018 mg/l/96h 0,018 - 0,024 / (Pimephales promelas) (72h) |
| EC50 - for Crustacea | 0,112 mg/l/48h 0,112 - 0,15/Daphnia Magna |
| EC50 - for Algae / Aquatic Plants | > 85 mg/l/72h Pseudokirchneriella subcapitata |

**12.2. Persistence and degradability**

AROMATIC HYDROCARBONS, C9

Rapidly degradable

HYDROM HYDROPHONE SILICATE

| | |
|---|---|
| Solubility in water | 0,1 - 100 mg/l |

Degradability: information not available

2-METHOXY-1-METHYLETHYL ACETATE

| | |
|---|---|
| Solubility in water | > 10000 mg/l |

Rapidly degradable
OECD Gl 301F 83% 10 d

4-HYDROXY-4-METHYLPENTAN-2-ONE

| | |
|---|---|
| Solubility in water | 1000 - 10000 mg/l |

Rapidly degradable
AFNOR T 90-312 70% 10 d

CYCLOHEXANONE

| | |
|---|---|
| Solubility in water | 86 mg/l |

Rapidly degradable

N-BUTYL ACETATE

| | |
|---|---|
| Solubility in water | 5,3 mg/l |

Rapidly degradable

BUTYLGLYCOL ACETATE

| | |
|---|---|
| Solubility in water | 15000 mg/l |

Rapidly degradable

DIMETHYL ADIPATE, DIMETHYL GLUTARATE, DIMETHYL SUCCINATE, REACTION MASS

| | |
|---|---|
| Solubility in water | 30000 mg/l 26000 - 40500 mg/l |

Rapidly degradable

**12.3. Bioaccumulative potential**

Tillplast ATBC

| | |
|---|---|
| Partition coefficient: n-octanol/water | 4,86 |

HYDROM HYDROPHONE SILICATE

| | |
|---|---|
| Partition coefficient: n-octanol/water | 0,53 |

2-METHOXY-1-METHYLETHYL ACETATE

| | |
|---|---|
| Partition coefficient: n-octanol/water | 1,2 |
| BCF | 100 |

| | |
|---|---|
| 4-HYDROXY-4-METHYLPENTAN-2-ONE | |
| Partition coefficient: n-octanol/water | -0,09 |
| CYCLOHEXANONE | |
| Partition coefficient: n-octanol/water | 0,86 |
| N-BUTYL ACETATE | |
| Partition coefficient: n-octanol/water | 2,3 |
| BCF | 15,3 |
| BUTYLGLYCOL ACETATE | |
| Partition coefficient: n-octanol/water | 1,51 |
| DIMETHYL ADIPATE, DIMETHYL GLUTARATE, DIMETHYL SUCCINATE, REACTION MASS | |
| Partition coefficient: n-octanol/water | 1,4 |

**12.4. Mobility in soil**

| | |
|---|---|
| 2-METHOXY-1-METHYLETHYL ACETATE | |
| Partition coefficient: soil/water | 1,7 |
| CYCLOHEXANONE | |
| Partition coefficient: soil/water | 1,18 |
| N-BUTYL ACETATE | |
| Partition coefficient: soil/water | < 3 |

**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.
Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.
Waste transportation may be subject to ADR restrictions.
CONTAMINATED PACKAGING
Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

## SECTION 14. Transport information

**14.1. UN number or ID number**

ADR / RID, IMDG, IATA: 1210

**14.2. UN proper shipping name**

| | |
| --- | --- |
| ADR / RID: | PRINTING INK or PRINTING INK RELATED MATERIAL |
| IMDG: | PRINTING INK or PRINTING INK RELATED MATERIAL |
| IATA: | PRINTING INK or PRINTING INK RELATED MATERIAL |

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

| | | |
| --- | --- | --- |
| ADR / RID: | Class: 3 | Label: 3 |
| IMDG: | Class: 3 | Label: 3 |
| IATA: | Class: 3 | Label: 3 |


**14.4. Packing group**

ADR / RID, IMDG, IATA: III

**14.5. Environmental hazards**

| | |
| --- | --- |
| ADR / RID: | NO |
| IMDG: | NO |
| IATA: | NO |

**14.6. Special precautions for user**

| | | | |
| --- | --- | --- | --- |
| ADR / RID: | HIN - Kemler: 30<br>Special provision: 163, 367 | Limited Quantities: 5 L | Tunnel restriction code: (D/E) |
| IMDG: | EMS: F-E, S-D | Limited Quantities: 5 L | |
| IATA: | Cargo: | Maximum quantity: 220 | Packaging instructions: |

| | | |
|---|---|---|
| Pass.: | L<br>Maximum quantity: 60 L | 366<br>Packaging instructions: 355 |
| Special provision: | A3, A72, A192 | |

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

Information not relevant

## SECTION 15. Regulatory information

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

Seveso Category - Directive 2012/18/EU: P5c

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

Product

| | |
|---|---|
| Point | 3 - 40 |

Contained substance

| | |
|---|---|
| Point | 75 |

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

not applicable

Substances in Candidate List (Art. 59 REACH)

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

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

| | |
|---|---|
| **Flam. Liq. 3** | Flammable liquid, category 3 |
| **Acute Tox. 4** | Acute toxicity, category 4 |
| **Asp. Tox. 1** | Aspiration hazard, category 1 |
| **Eye Dam. 1** | Serious eye damage, category 1 |
| **Eye Irrit. 2** | Eye irritation, category 2 |
| **Skin Irrit. 2** | Skin irritation, category 2 |
| **STOT SE 3** | Specific target organ toxicity - single exposure, category 3 |
| **Aquatic Chronic 2** | Hazardous to the aquatic environment, chronic toxicity, category 2 |
| **Aquatic Chronic 3** | Hazardous to the aquatic environment, chronic toxicity, category 3 |
| **H226** | Flammable liquid and vapour. |
| **H302** | Harmful if swallowed. |
| **H312** | Harmful in contact with skin. |
| **H332** | Harmful if inhaled. |
| **H304** | May be fatal if swallowed and enters airways. |
| **H318** | Causes serious eye damage. |
| **H319** | Causes serious eye irritation. |
| **H315** | Causes skin irritation. |
| **H335** | May cause respiratory irritation. |
| **H336** | May cause drowsiness or dizziness. |
| **H411** | Toxic to aquatic life with long lasting effects. |
| **H412** | Harmful to aquatic life with long lasting effects. |
| **EUH066** | Repeated exposure may cause skin dryness or cracking. |

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).

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- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
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Note for users:
The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.
This document must not be regarded as a guarantee on any specific product property.
The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.
Provide appointed staff with adequate training on how to use chemical products.
CALCULATION METHODS FOR CLASSIFICATION
Chemical and physical hazards: Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.
Health hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.
Environmental hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.

For information on any exposure scenarios of the substances present in the mixture, contact Sericom Italia srl.

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