**Safety Data Sheet**

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

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|  **1.1. Product identifier** |
|  Code: | **V404GOT**  |
|  Product name | **Repara Gotele 400 ml**  |
|  Chemical name and synonym | **Spray paint**  |
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|  **1.2. Relevant identified uses of the substance or mixture and uses advised against** |
|  Intended use | **Water-based spray paint for coating metal, wood, plastic and polystyrene.** |

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|  **1.3. Details of the supplier of the safety data sheet** |
|  Name | **AMBRO-SOL S.R.L.**  |
|  Full address | **Via per Pavone del Mella n.21**  |
|  District and Country | **25020 Cigole (BS)**  |
|   | **Italia**  |
|   | **Tel. +39 030 9959674**  |
|   | **Fax +39 030 959265**  |
|  e-mail address of the competent person |  |
|  responsible for the Safety Data Sheet | **quality@ambro-sol.com**  |
|   |  |

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|  **1.4. Emergency telephone number** |
|  For urgent inquiries refer to |

**Centro Antiveleni di Pavia: 0382 24444 (IRCCS Fondazione Maugeri - Pavia)**

**Centro Antiveleni di Bergamo: 800 883300 (Ospedali Riuniti - Bergamo)**

**Centro Antiveleni di Firenze: 055 7947819 (Ospedale Careggi - Firenze)**

**Centro Antiveleni di Roma: 06 3054343 (Policlinico Gemelli - Roma)**

**Centro Antiveleni di Napoli: 081 7472870 (Ospedale Cardarelli - Napoli)**

**Centro de Información Toxicológica en España: 91 5620420 (Inst. Nacional de Toxicología y Ciencias Forenses)**

**Centre Antipoison en France: 01 40054848 (Centre Antipoison et de Toxicovigilance de Paris)**

**Pomorskie Centrum Toksykologii ul. Kartuska 4/6, 80-104 Gdańsk tel./fax: (58) 682 04 04**

**American Association of Poison Control Centers: +1 (800) 222-1222**

**Giftkontrollzentrum Berlin, Brandenburg 030 –**

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|  **19 240**  |

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|  **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 2015/830.

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:

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|  Aerosol, category 1 | H222 | Extremely flammable aerosol. |
|   | H229 | Pressurised container: may burst if heated. |
|   |  |  |

**2.2. Label elements**

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

|  |  |
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|  Hazard pictograms: |  |
|   |  |  |  |  |  |  |

|  |  |
| --- | --- |
|  Signal words: | Danger |

Hazard statements:

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|  **H222** | Extremely flammable aerosol. |
|  **H229** | Pressurised container: may burst if heated. |

Precautionary statements:

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|  **P210** | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. |
|  **P251** | Do not pierce or burn, even after use. |
|  **P410+P412** | Protect from sunlight. Do no expose to temperatures exceeding 50°C / 122°F. |
|  **P211** | Do not spray on an open flame or other ignition source. |

**2.3. Other hazards**

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

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|  **SECTION 3. Composition/information on ingredients** |

**3.1. Substances**

Information not relevant

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|  **3.2. Mixtures** |

Contains:

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|  **Identification** | **x = Conc. %** | **Classification 1272/2008 (CLP)** |  |
|  **Dimethyl ether** |  |  |  |
|  CAS 115-10-6 | 19 ≤ x < 23 | Flam. Gas 1 H220, Press. Gas H280 |  |
|  EC 204-065-8 |  |  |  |
|  INDEX 603-019-00-8 |  |  |  |
|  Reg. no. 01-2119472128-37-XXXX |  |  |  |
|  **ETHANOL** |  |  |  |
|  CAS 64-17-5 | 1 ≤ x < 3 | Flam. Liq. 2 H225, Eye Irrit. 2 H319 |  |
|  EC 200-578-6 |  |  |  |
|  INDEX 603-002-00-5 |  |  |  |
|  Reg. no. 01-2119457610-43-XXXX |  |  |  |
|  **2-PROPANOLO** |  |  |  |
|  CAS 67-63-0 | 1 ≤ x < 3 | Flam. Liq. 2 H225, Eye Irrit. 2 H319, STOT SE 3 H336 |  |
|  EC 200-661-7 |  |  |  |
|  INDEX 603-117-00-0 |  |  |  |
|  Reg. no. 01-2119457558-25-XXXX |  |  |  |
|  **2-BUTOXYETHANOL** |  |  |  |
|  CAS 111-76-2 | 0,5 ≤ x < 1 | Acute Tox. 4 H302, Acute Tox. 4 H312, Acute Tox. 4 H332, Eye Irrit. 2 H319, Skin Irrit. 2 H315 |  |
|  EC 203-905-0 |  |  |  |
|  INDEX 603-014-00-0 |  |  |  |
|  Reg. no. 01-2119475108-36-XXXX |  |  |  |

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

The product is an aerosol containing propellants. For the purposes of calculation of the health hazards, propellants are not considered (unless they have health hazards). The percentages indicated are inclusive of the propellants.

Percentage of propellants: 22,00 %

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|  **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. Wash immediately with plenty of water. If irritation persists, get medical advice/attention. Wash contaminated clothing before using it again.

INHALATION: Remove to open air. In the event of breathing difficulties, get medical advice/attention immediately.

INGESTION: Get medical advice/attention. Induce vomiting only if indicated by the doctor. Never give anything by mouth to an unconscious person, unless 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

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|  **SECTION 5. Firefighting measures** |

**5.1. Extinguishing media**

SUITABLE EXTINGUISHING EQUIPMENT

The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.

UNSUITABLE EXTINGUISHING EQUIPMENT

None in particular.

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

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

If overheated, aerosol cans can deform, explode and be propelled considerable distances. Put a protective helmet on before approaching the fire. Do not breathe combustion products.

**5.3. Advice for firefighters**

GENERAL INFORMATION

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear.

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).

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|  **SECTION 6. Accidental release measures** |

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

Eliminate all sources of ignition (cigarettes, flames, sparks, etc.) from the leakage site. Send away individuals who are not suitably equipped. Wear protective gloves / protective clothing / eye protection / face protection.

**6.2. Environmental precautions**

Do not disperse in the environment.

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

Use inert absorbent material to soak up leaked product. 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.

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|  **SECTION 7. Handling and storage** |

**7.1. Precautions for safe handling**

Avoid bunching of electrostatic charges. Do not spray on flames or incandescent bodies. Vapours may catch fire and an explosion may occur; vapour accumulation is therefore to be avoided by leaving windows and doors open and ensuring good cross ventilation. Do not eat, drink or smoke during use. Do not breathe spray.

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

Store in a place where adequate ventilation is ensured, away from direct sunlight at a temperature below 50°C / 122°F, away from any combustion sources.

**7.3. Specific end use(s)**

Information not available

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|  **SECTION 8. Exposure controls/personal protection** |

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|  **8.1. Control parameters** |

Regulatory References:

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| --- | --- | --- |
|  DEU | Deutschland | TRGS 900 (Fassung 31.1.2018 ber.) - Liste der Arbeitsplatzgrenzwerte und Kurzzeitwerte |
|  ESP | España | INSHT - Límites de exposición profesional para agentes químicos en España 2017 |
|  FRA | France | JORF n°0109 du 10 mai 2012 page 8773 texte n° 102 |
|  GBR | United Kingdom | EH40/2005 Workplace exposure limits |
|  ITA | Italia | Decreto Legislativo 9 Aprile 2008, n.81 |
|  POL | Polska | ROZPORZĄDZENIE MINISTRA PRACY I POLITYKI SPOŁECZNEJ z dnia 7 czerwca 2017 r |
|  PRT | Portugal | Ministério da Economia e do Emprego Consolida as prescrições mínimas em matéria de protecção dos trabalhadores contra os riscos para a segurança e a saúde devido à exposição a agentes químicos no trabalho - Diaro da Republica I 26; 2012-02-06 |
|  EU | OEL EU | 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 91/322/EEC. |
|   | TLV-ACGIH | ACGIH 2018 |

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|  **Dimethyl ether** |
|  **Threshold Limit Value** |
|  Type | Country | TWA/8h |  | STEL/15min |  |  |  |
|   |  | mg/m3 | ppm | mg/m3 | ppm |  |  |
|  OEL | EU | 1920 | 1000 |  |  |  |  |
|  Predicted no-effect concentration - PNEC |  |  |  |
|  Normal value in fresh water | 155 | µg/l |  |
|  Normal value in marine water | 16 | µg/l |  |
|  Normal value for fresh water sediment | 681 | µg/kg/d |  |
|  Normal value for marine water sediment | 69 | µg/kg/d |  |
|  Normal value of STP microorganisms | 160 | mg/l |  |
|  Normal value for the terrestrial compartment | 45 | µg/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 |  | NPI |  | NPI |  |  |  |  |
|  Inhalation |  | VND |  | 471 mg/m3 |  | VND |  | 1894 mg/m3 |
|  Skin |  | NPI |  | NPI |  | NPI |  | NPI |

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|  **ETHANOL** |
|  **Threshold Limit Value** |
|  Type | Country | TWA/8h |  | STEL/15min |  |  |  |
|   |  | mg/m3 | ppm | mg/m3 | ppm |  |  |
|  AGW | DEU |  960 |  500 | 1920 | 1000 |  |  |
|  MAK | DEU |  960 |  500 | 1920 | 1000 |  |  |
|  VLA | ESP |  |  | 1910 | 1000 |  |  |
|  VLEP | FRA | 1900 | 1000 | 9500 | 5000 |  |  |
|  WEL | GBR | 1920 | 1000 |  |  |  |  |
|  NDS | POL | 1900 |  |  |  |  |  |
|  TLV-ACGIH |  |  |  | 1884 | 1000 |  |  |
|  Predicted no-effect concentration - PNEC |  |  |  |
|  Normal value in fresh water | 960 | µg/l |  |
|  Normal value in marine water | 790 | µg/l |  |
|  Normal value for fresh water sediment | 3,6 | mg/kg/d |  |
|  Normal value for marine water sediment | 2,9 | mg/kg/d |  |
|  Normal value for water, intermittent release | 2,75 | mg/l |  |
|  Normal value of STP microorganisms | 580 | mg/l |  |
|  Normal value for the food chain (secondary poisoning) | 380 | mg/kg |  |
|  Normal value for the terrestrial compartment | 630 | µg/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 |  | NPI |  | 87 mg/kg bw/d |  |  |  | 87 |
|  Inhalation | 950 mg/m3 | NPI | NPI | 114 mg/m3 | 1900 mg/m3 | NPI | NPI | 950 mg/m3 |
|  Skin | NPI | NPI | NPI | 206 mg/kg bw/d | NPI | NPI | NPI | 343 mg/kg bw/d |

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|  **2-PROPANOLO** |
|  **Threshold Limit Value** |
|  Type | Country | TWA/8h |  | STEL/15min |  |  |  |
|   |  | mg/m3 | ppm | mg/m3 | ppm |  |  |
|  AGW | DEU |  500 |  200 | 1000 |  400 |  |  |
|  MAK | DEU |  500 |  200 | 1000 |  400 |  |  |
|  VLA | ESP |  500 |  200 | 1000 |  400 |  |  |
|  VLEP | FRA |  |  |  980 |  400 |  |  |
|  WEL | GBR |  999 |  400 | 1250 |  500 |  |  |
|  NDS | POL |  900 |  | 1200 |  |  |  |
|  TLV-ACGIH |  |  492 |  200 |  983 |  400 |  |  |
|  Predicted no-effect concentration - PNEC |  |  |  |
|  Normal value in fresh water | 140,9 | mg/l |  |
|  Normal value in marine water | 140,9 | mg/l |  |
|  Normal value for fresh water sediment | 552 | mg/kg/d |  |
|  Normal value for marine water sediment | 552 | mg/kg/d |  |
|  Normal value for water, intermittent release | 140,9 | mg/l |  |
|  Normal value of STP microorganisms | 2,251 | g/l |  |
|  Normal value for the food chain (secondary poisoning) | 160 | mg/kg |  |
|  Normal value for the terrestrial compartment | 28 | 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 | VND | VND | 26 mg/kg bw/d | VND | VND | VND | VND |
|  Inhalation | VND | VND | VND | 89 mg/m3 | VND | VND | VND | 500 mg/m3 |
|  Skin | VND | VND | VND | 319 mg/kg bw/d | VND | VND | VND | 888 mg/kg |

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|  **2-BUTOXYETHANOL** |
|  **Threshold Limit Value** |
|  Type | Country | TWA/8h |  | STEL/15min |  |  |  |
|   |  | mg/m3 | ppm | mg/m3 | ppm |  |  |
|  AGW | DEU |  49 |  10 |  196 |  40 | SKIN |  |
|  MAK | DEU |  49 |  10 |  98 |  20 | SKIN |  |
|  VLA | ESP |  98 |  20 |  245 |  50 | SKIN |  |
|  VLEP | FRA |  49 |  10 |  246 |  50 | SKIN |  |
|  WEL | GBR |  123 |  25 |  246 |  50 | SKIN |  |
|  VLEP | ITA |  98 |  20 |  246 |  50 | SKIN |  |
|  NDS | POL |  98 |  |  200 |  |  |  |
|  VLE | PRT |  98 |  20 |  246 |  50 | SKIN |  |
|  OEL | EU |  98 |  20 |  246 |  50 | SKIN |  |
|  TLV-ACGIH |  |  97 |  20 |  |  |  |  |
|  Predicted no-effect concentration - PNEC |  |  |  |
|  Normal value in fresh water | 8,8 | mg/l |  |
|  Normal value in marine water | 880 |  µg/l |  |
|  Normal value for fresh water sediment | 34,6 | mg/kg/d |  |
|  Normal value for water, intermittent release | 9,1 | mg/l |  |
|  Normal value of STP microorganisms | 463 | mg/l |  |
|  Normal value for the food chain (secondary poisoning) | 20 | mg/kg |  |
|  Normal value for the terrestrial compartment | 2,33 | 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 |  | 26,7 mg/kg bw/d |  | 6,3 mg/kg bw/d |  |  |  |  |
|  Inhalation | 147 mg/m3 | 426 mg/m3 | NPI | 59 mg/m3 | 246 mg/m3 | 1091 mg/m3 | NPI | 98 mg/m3 |
|  Skin | VND | 89 mg/kg bw/d | NPI | 75 mg/kg bw/d | VND | 89 mg/kg bw/d | NPI | 125 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.

TLV of solvent mixture: 582 mg/m3

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|  **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.

HAND PROTECTION

None required.

SKIN PROTECTION

Wear category I professional long-sleeved overalls and safety footwear (see Directive 89/686/EEC and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

EYE PROTECTION

Wear airtight protective goggles (see standard EN 166).

RESPIRATORY PROTECTION

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, a mask with a type AX filter combined with a type P filter should be worn (see standard EN 14387).

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.

ENVIRONMENTAL EXPOSURE CONTROLS

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

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|  **SECTION 9. Physical and chemical properties** |

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

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|  Appearance | aerosol |
|  Colour | various |
|  Odour | alcol |
|  Odour threshold | n.a. |
|  pH | Not available |
|  Melting point / freezing point | Not available |
|  Initial boiling point | > Not applicable |
|  Boiling range | Not available |
|  Flash point | < 0 °C |
|  Evaporation Rate | Not available |
|  Flammability of solids and gases | Not available |
|  Lower inflammability limit | Not available |
|  Upper inflammability limit | Not available |
|  Lower explosive limit | Not available |
|  Upper explosive limit | Not available |
|  Vapour pressure | Not available |
|  Vapour density | Not available |
|  Relative density | 0,95 - 0,98 g/ml g/ml |
|  Solubility | partially soluble in water |
|  Partition coefficient: n-octanol/water | Not available |
|  Auto-ignition temperature | Not available |
|  Decomposition temperature | n.a. |
|  Viscosity | Not available |
|  Explosive properties | not applicable |
|  Oxidising properties | not applicable |

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|  **9.2. Other information** |

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| --- | --- |
|  Molecular weight | 61,419 |
|  Total solids (250°C / 482°F) | 52,00 % |
|  VOC (Directive 2010/75/EC) : | 25,50 % - 174,42 g/litre |
|  VOC (volatile carbon) : | 13,41 % - 91,70 g/litre |

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|  **SECTION 10. Stability and reactivity** |

**10.1. Reactivity**

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

2-BUTOXYETHANOL

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**

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

ETHANOL

Risk of explosion on contact with: alkaline metals,alkaline oxides,calcium hypochlorite,sulphur monofluoride,acetic anhydride,acids,concentrated hydrogen peroxide,perchlorates,perchloric acid,perchloronitrile,mercury nitrate,nitric acid,silver,silver nitrate,ammonia,silver oxide,ammonia,strong oxidising agents,nitrogen dioxide.May react dangerously with: bromoacetylene,chlorine acetylene,bromine trifluoride,chromium trioxide,chromyl chloride,fluorine,potassium tert-butoxide,lithium hydride,phosphorus trioxide,black platinum,zirconium (IV) chloride,zirconium (IV) iodide.Forms explosive mixtures with: air.

2-BUTOXYETHANOL

May react dangerously with: aluminium,oxidising agents.Forms peroxides with: air.

**10.4. Conditions to avoid**

Avoid overheating.

ETHANOL

Avoid exposure to: sources of heat,naked flames.

2-BUTOXYETHANOL

Avoid exposure to: sources of heat,naked flames.

**10.5. Incompatible materials**

Strong reducing or oxidising agents, strong acids or alkalis, hot material.

2-BUTOXYETHANOL

Keep away from: strong oxidants.

**10.6. Hazardous decomposition products**

2-BUTOXYETHANOL

May develop: hydrogen.

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|  **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 toxicological effects**

Metabolism, toxicokinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

Information not available

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

Information not available

Interactive effects

Information not available

ACUTE TOXICITY

LC50 (Inhalation) of the mixture:

> 20 mg/l

LD50 (Oral) of the mixture:

Not classified (no significant component)

LD50 (Dermal) of the mixture:

Not classified (no significant component)

ETHANOL

LD50 (Oral) > 1000 mg/kg bw Rat

LD50 (Dermal) > 10000 mg/kg bw

LC50 (Inhalation) > 100 mg/l/4h Pimephales promelas

2-BUTOXYETHANOL

LD50 (Oral) > 1000 mg/kg bw guinea pig

LD50 (Dermal) > 400 mg/kg bw rabbit

LC50 (Inhalation) > 400 ppm/4h rat

2-PROPANOLO

LD50 (Oral) 5840 mg/kg bw Rat

LD50 (Dermal) 16,4 ml/kg rabbit

LC50 (Inhalation) > 10000 ppm/6h Rat

Dimethyl ether

LC50 (Inhalation) 164000 ppm rat

SKIN CORROSION / IRRITATION

Does not meet the classification criteria for this hazard class

SERIOUS EYE DAMAGE / IRRITATION

Does not meet the classification criteria for this hazard class

RESPIRATORY OR SKIN SENSITISATION

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

Does not meet the classification criteria for this hazard class

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|  **SECTION 12. Ecological information** |

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation.

**12.1. Toxicity**

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|  ETHANOL |  |  |
|  LC50 - for Fish |  | 15,4 g/l/96h 4 days |
|  EC50 - for Crustacea |  | 10 g/l/48h |
|  EC50 - for Algae / Aquatic Plants |  | 275 mg/l/72h |
|  EC10 for Algae / Aquatic Plants |  | 11,5 mg/l/72h |
|  Chronic NOEC for Fish |  | 625 mg/l 5 days |
|  Chronic NOEC for Crustacea |  | 9,6 mg/l 9 days |

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|  2-BUTOXYETHANOL |  |  |
|  LC50 - for Fish |  | 1,474 g/l |
|  EC50 - for Crustacea |  | 1,55 g/l |
|  EC50 - for Algae / Aquatic Plants |  | 911 mg/l/72h |
|  EC10 for Crustacea |  | 134 mg/l 21 days |
|  Chronic NOEC for Fish |  | 100 mg/l 21 days |
|  Chronic NOEC for Crustacea |  | 100 mg/l 21 days |
|  Chronic NOEC for Algae / Aquatic Plants |  | 88 mg/l 72 h |

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| --- | --- | --- |
|  2-PROPANOLO |  |  |
|  LC50 - for Fish |  | 9,6 g/l/96h |

|  |  |  |
| --- | --- | --- |
|  Dimethyl ether |  |  |
|  LC50 - for Fish |  | > 4000 mg/l/96h Poecilia reticulata |
|  EC50 - for Crustacea |  | > 4000 mg/l/48h Daphnia magna |
|  Chronic NOEC for Fish |  | 4,1 g/l 4 days |
|  Chronic NOEC for Crustacea |  | 4,4 g/l 48 h  |

**12.2. Persistence and degradability**

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

 Rapidly degradable

|  |  |  |
| --- | --- | --- |
|  2-BUTOXYETHANOL |  |  |
|  Solubility in water |  | 1000 - 10000 mg/l |

 Rapidly degradable

|  |  |  |
| --- | --- | --- |
|  2-PROPANOLO |  |  |

 Rapidly degradable

 Readily biodegradable (50%)

|  |  |  |
| --- | --- | --- |
|  Dimethyl ether |  |  |

 NOT rapidly degradable

 Under test conditions no biodegradation observed (100%)

**12.3. Bioaccumulative potential**

|  |  |  |
| --- | --- | --- |
|  ETHANOL |  |  |
|  Partition coefficient: n-octanol/water |  | -0,35  |

|  |  |  |
| --- | --- | --- |
|  2-BUTOXYETHANOL |  |  |
|  Partition coefficient: n-octanol/water |  | 0,81  |

|  |  |  |
| --- | --- | --- |
|  2-PROPANOLO |  |  |
|  Partition coefficient: n-octanol/water |  | 0,05  |

**12.4. Mobility in soil**

Information not available

**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 greater than 0,1%.

**12.6. Other adverse effects**

Dimethyl ether

Given the high rate of disappearance of the solution, it is unlikely that the product constitutes a significant hazard to aquatic life. Potential ozone-depleting effect: 0. Global warming potential (GWP): 1.

|  |
| --- |
|  **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**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  ADR / RID, IMDG, IATA: | 1950 |  |  |  |  |  |

**14.2. UN proper shipping name**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  ADR / RID: | AEROSOLS |  |  |  |  |  |
|  IMDG: | AEROSOLS |  |  |  |  |  |
|  IATA: | AEROSOLS, FLAMMABLE |  |  |  |  |  |

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

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  ADR / RID: | Class: 2 | Label: 2.1 |  |  |  |  |
|  IMDG: | Class: 2 | Label: 2.1 |  |  |  |  |
|  IATA: | Class: 2 | Label: 2.1 |  |  |  |  |

**14.4. Packing group**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  ADR / RID, IMDG, IATA: | - |  |  |  |  |  |

**14.5. Environmental hazards**

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

**14.6. Special precautions for user**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  ADR / RID: |  | HIN - Kemler: -- |  | Limited Quantities: 1 L |  | Tunnel restriction code: (D) |
|   |  | Special Provision: - |  |  |  |  |
|  IMDG: |  | EMS: F-D, S-U |  | Limited Quantities: 1 L |  |  |
|  IATA: |  | Cargo: |  | Maximum quantity: 150 Kg |  | Packaging instructions: 203 |
|   |  | Pass.: |  | Maximum quantity: 75 Kg |  | Packaging instructions: 203 |
|   |  | Special Instructions: |  | A145, A167, A802 |  |  |

**14.7. Transport in bulk according to Annex II of Marpol and the IBC Code**

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/EC: P3a

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

Product

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

Substances in Candidate List (Art. 59 REACH)

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

Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Healthcare controls

Information not available

|  |
| --- |
|  **15.2. Chemical safety assessment** |

No chemical safety assessment has been processed for the mixture and the substances it contains.

|  |
| --- |
|  **SECTION 16. Other information** |

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

|  |  |  |
| --- | --- | --- |
|  **Flam. Gas 1** | Flammable gas, category 1 |  |
|  **Aerosol 1** | Aerosol, category 1 |  |
|  **Aerosol 3** | Aerosol, category 3 |  |
|  **Flam. Liq. 2** | Flammable liquid, category 2 |  |
|  **Press. Gas** | Pressurised gas |  |
|  **Acute Tox. 4** | Acute toxicity, category 4 |  |
|  **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 |  |
|  **H220** | Extremely flammable gas. |  |
|  **H222** | Extremely flammable aerosol. |  |
|  **H229** | Pressurised container: may burst if heated. |  |
|  **H225** | Highly flammable liquid and vapour. |  |
|  **H280** | Contains gas under pressure; may burst if heated. |  |
|  **H302** | Harmful if swallowed. |  |
|  **H312** | Harmful in contact with skin. |  |
|  **H332** | Harmful if inhaled. |  |
|  **H319** | Causes serious eye irritation. |  |
|  **H315** | Causes skin irritation. |  |
|  **H336** | May cause drowsiness or dizziness. |  |

LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road

- CAS NUMBER: Chemical Abstract Service Number

- CE50: Effective concentration (required to induce a 50% effect)

- CE NUMBER: Identifier in ESIS (European archive of existing substances)

- CLP: EC Regulation 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 NUMBER: 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: EC Regulation 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 STEL: Short-term exposure limit

- TWA: Time-weighted average 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) 790/2009 (I Atp. CLP) of the European Parliament

4. Regulation (EU) 2015/830 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

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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)

- The Merck Index. - 10th Edition

- Handling Chemical Safety

- INRS - Fiche Toxicologique (toxicological sheet)

- Patty - Industrial Hygiene and Toxicology

- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition

- IFA GESTIS website

- ECHA website

- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

Note for users:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

Changes to previous review:

The following sections were modified:

01 / 03.