



SAFETY DATA SHEET

2800 MARKER FLUO

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

1.1 Product identifier

Product name : 2800 MARKER FLUO
Product description : Aerosol. Paint.
Product type : Aerosol.

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

| Identified uses | |
|---|--------|
| Industrial uses Consumer uses Professional uses | |
| Uses advised against | Reason |
| None identified. | - |

1.3 Details of the supplier of the safety data sheet

Rust-Oleum Europe - Martin Mathys NV, Kolenbergstraat 23, B-3545 Zelem, Belgium
 Telephone no.: +32 (0) 13 460 200
 Fax no.: +32 (0) 13 460 201

e-mail address of person responsible for this SDS : rpmeurohas@ro-m.com

1.4 Emergency telephone number

Supplier

Telephone number : +44 (0) 207 858 1228
Hours of operation : 24 / 7

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Aerosol 1, H222, H229
 Eye Irrit. 2, H319
 STOT SE 3, H336
 Aquatic Chronic 3, H412

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

SECTION 2: Hazards identification

Hazard pictograms



Signal word

: Danger

Hazard statements

: Extremely flammable aerosol.
 Pressurised container: May burst if heated.
 Causes serious eye irritation.
 May cause drowsiness or dizziness.
 Harmful to aquatic life with long lasting effects.

Precautionary statements

General

: P102 - Keep out of reach of children.
 P103 - Read label before use.
 P101 - If medical advice is needed: Have product container or label at hand.

Prevention

: P211 - Do not spray on an open flame or other ignition source.
 P210 - Keep away from heat, sparks, open flames and hot surfaces. - No smoking.
 P271 - Use only outdoors or in a well-ventilated area.
 P260 - Do not breathe vapour or spray.
 P251 - Do not pierce or burn, even after use.

Response

: P305 - IF IN EYES:
 P351 - Rinse cautiously with water for several minutes.
 P338 - Remove contact lenses, if present and easy to do. Continue rinsing.
 P312 - Call a doctor if you feel unwell.

Storage

: P410 + P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C.

Disposal

: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazardous ingredients

: ethyl acetate; hydrocarbons, C9-C11, n-/ iso-/ cyclo-alkanes, < 2% aromatics; 1-methoxy-2-propanol

Supplemental label elements

: Not applicable.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

: Not applicable.

Special packaging requirements

Containers to be fitted with child-resistant fastenings

: Not applicable.

Tactile warning of danger

: Not applicable.

2.3 Other hazards

Other hazards which do not result in classification

: None known.

SECTION 3: Composition/information on ingredients**3.2 Mixtures** : Mixture

| Product/ingredient name | Identifiers | % | Classification | |
|---|---|-----------|---|---------|
| | | | Regulation (EC) No. 1272/2008 [CLP] | Type |
| dimethyl ether | EC: 204-065-8 CAS: 115-10-6 Index: 603-019-00-8 | ≥50 - ≤75 | Flam. Gas 1, H220 | [2] |
| ethyl acetate | REACH #: 01-2119475103-46 EC: 205-500-4 CAS: 141-78-6 Index: 607-022-00-5 | ≥10 - ≤25 | Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH066 | [1] [2] |
| hydrocarbons, C9-C11, n-/ iso-/ cyclo-alkanes, < 2% aromatics | REACH #: 01-2119463258-33 EC: 919-857-5 Index: 649-327-00-6 | ≤5 | Flam. Liq. 3, H226 STOT SE 3, H336 Asp. Tox. 1, H304 EUH066 | [1] [2] |
| 1-methoxy-2-propanol | REACH #: 01-2119457435-35 EC: 203-539-1 CAS: 107-98-2 Index: 603-064-00-3 | ≤3 | Flam. Liq. 3, H226 STOT SE 3, H336 | [1] [2] |
| hydrocarbons, isoalkanes, C7-C10 | REACH #: 01-2119471305-42 EC: 292-458-5 CAS: 90622-56-3 | ≤3 | Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 Aquatic Chronic 3, H412 | [1] [2] |
| 1-isopropyl-2, 2-dimethyltrimethylene diisobutyrate | REACH #: 01-2119451093-47 EC: 229-934-9 CAS: 6846-50-0 | ≤3 | | [1] |
| See Section 16 for the full text of the H statements declared above. | | | | |

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

[3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII

[4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

[5] Substance of equivalent concern

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures**4.1 Description of first aid measures**

- General** : In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and seek medical advice.
- Eye contact** : Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek immediate medical advice.
- Inhalation** : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- Skin contact** : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners.

SECTION 4: First aid measures

- Ingestion** : If swallowed, seek medical advice immediately and show the container or label. Keep person warm and at rest. Do NOT induce vomiting.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

4.2 Most important symptoms and effects, both acute and delayed

There are no data available on the mixture itself. The mixture has been assessed following the conventional method of the CLP Regulation (EC) No 1272/2008 and is classified for toxicological properties accordingly. See Sections 2 and 3 for details.

Exposure to component solvent vapour concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness.

Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin.

If splashed in the eyes, the liquid may cause irritation and reversible damage.

Ingestion may cause nausea, diarrhea and vomiting.

This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
- Skin contact** : No specific data.
- Ingestion** : No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.

See toxicological information (Section 11)

SECTION 5: Firefighting measures**5.1 Extinguishing media**

- Suitable extinguishing media** : Recommended: alcohol-resistant foam, CO₂, powders, water spray.
- Unsuitable extinguishing media** : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

SECTION 5: Firefighting measures

- Hazards from the substance or mixture** : Extremely flammable aerosol. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed. Runoff to sewer may create fire or explosion hazard. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

5.3 Advice for firefighters

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
- Additional information** : Pressurised container: protect from sunlight and do not expose to temperature exceeding 50°C. Do not pierce or burn, even after use. Do not puncture, incinerate or store the container at temperatures above 49°C (120°F) or in direct sunlight. Container explosion may occur under fire conditions or when heated. Bursting aerosol containers may be propelled from a fire at high speed.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurised contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

- : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

6.3 Methods and material for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

SECTION 6: Accidental release measures

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.

6.4 Reference to other sections : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance.

7.1 Precautions for safe handling : Prevent the creation of flammable or explosive concentrations of vapours in air and avoid vapour concentrations higher than the occupational exposure limits. In addition, the product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard. Mixture may charge electrostatically: always use earthing leads when transferring from one container to another. Operators should wear antistatic footwear and clothing and floors should be of the conducting type. Keep away from heat, sparks and flame. No sparking tools should be used. Avoid contact with skin and eyes. Avoid the inhalation of dust, particulates, spray or mist arising from the application of this mixture. Avoid inhalation of dust from sanding. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Put on appropriate personal protective equipment (see Section 8). Never use pressure to empty. Container is not a pressure vessel. Always keep in containers made from the same material as the original one. Comply with the health and safety at work laws. Do not allow to enter drains or watercourses.

Information on fire and explosion protection
Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air.

When operators, whether spraying or not, have to work inside the spray booth, ventilation is unlikely to be sufficient to control particulates and solvent vapour in all cases. In such circumstances they should wear a compressed air-fed respirator during the spraying process and until such time as the particulates and solvent vapour concentration has fallen below the exposure limits.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations.

Notes on joint storage

Keep away from: oxidising agents, strong alkalis, strong acids.

Additional information on storage conditions

Observe label precautions. Do not store above the following temperature: 35°C (95°F). Store in a dry, cool and well-ventilated area. Keep away from heat and direct sunlight. Keep away from sources of ignition. No smoking. Prevent unauthorised access. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Seveso Directive - Reporting thresholds (in tonnes)

Danger criteria

SECTION 7: Handling and storage

| Category | Notification and MAPP threshold | Safety report threshold |
|---|---------------------------------|-------------------------|
| P3a: Flammable aerosols containing flammable gases or flammable liquids | 150 | 500 |

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

8.1 Control parameters**Occupational exposure limits**

| Product/ingredient name | Exposure limit values |
|---|--|
| dimethyl ether | EH40/2005 WELs (United Kingdom (UK), 12/2011). STEL: 958 mg/m ³ 15 minutes. STEL: 500 ppm 15 minutes. TWA: 766 mg/m ³ 8 hours. TWA: 400 ppm 8 hours. |
| ethyl acetate | EH40/2005 WELs (United Kingdom (UK), 12/2011). STEL: 400 ppm 15 minutes. TWA: 200 ppm 8 hours. |
| hydrocarbons, C9-C11, n-/ iso-/ cyclo-alkanes, < 2% aromatics | EH40/2005 WELs (United Kingdom (UK), 8/2007). STEL: 850 mg/m ³ , (as turpentine) 15 minutes. Form: Vapour TWA: 566 mg/m ³ , (as turpentine (100 ppm)) 8 hours. Form: Vapour |
| 1-methoxy-2-propanol | EH40/2005 WELs (United Kingdom (UK), 12/2011). Absorbed through skin. STEL: 560 mg/m ³ 15 minutes. STEL: 150 ppm 15 minutes. TWA: 375 mg/m ³ 8 hours. TWA: 100 ppm 8 hours. |
| hydrocarbons, isoalkanes, C7-C10 | EH40/2005 WELs (United Kingdom (UK), 8/2007). STEL: 850 mg/m ³ , (as turpentine) 15 minutes. Form: Vapour TWA: 566 mg/m ³ , (as turpentine (100 ppm)) 8 hours. Form: Vapour |

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

SECTION 8: Exposure controls/personal protection

| Product/ingredient name | Type | Exposure | Value | Population | Effects |
|---|------|------------------------|-------------------------|------------|----------|
| ethyl acetate | DNEL | Short term Inhalation | 1468 mg/m ³ | Workers | Local |
| | DNEL | Short term Inhalation | 1468 mg/m ³ | Workers | Systemic |
| | DNEL | Long term Inhalation | 734 mg/m ³ | Workers | Local |
| | DNEL | Long term Inhalation | 34 mg/m ³ | Workers | Systemic |
| | DNEL | Long term Dermal | 63 mg/kg bw/day | Workers | Systemic |
| | DNEL | Short term Inhalation | 734 mg/m ³ | Consumers | Local |
| | DNEL | Short term Inhalation | 734 mg/m ³ | Consumers | Systemic |
| | DNEL | Long term Inhalation | 367 mg/m ³ | Consumers | Local |
| | DNEL | Long term Inhalation | 367 mg/m ³ | Consumers | Systemic |
| | DNEL | Long term Dermal | 37 mg/kg bw/day | Consumers | Systemic |
| hydrocarbons, C9-C11, n-/ iso-/ cyclo-alkanes, < 2% aromatics | DNEL | Long term Oral | 4,5 mg/kg bw/day | Consumers | Systemic |
| | DNEL | Long term Dermal | 208 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Inhalation | 871 mg/m ³ | Workers | Systemic |
| | DNEL | Long term Oral, Dermal | 125 mg/kg bw/day | Consumers | Systemic |
| | DNEL | Long term Inhalation | 185 mg/m ³ | Consumers | Systemic |
| 1-methoxy-2-propanol | DNEL | Short term Inhalation | 553,5 mg/m ³ | Workers | Local |
| | DNEL | Long term Inhalation | 369 mg/m ³ | Workers | Systemic |
| | DNEL | Long term Dermal | 50,6 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Inhalation | 43,9 mg/m ³ | Consumers | Systemic |
| | DNEL | Long term Dermal | 18,1 mg/kg bw/day | Consumers | Systemic |
| | DNEL | Long term Oral | 3,3 mg/kg bw/day | Consumers | Systemic |
| hydrocarbons, isoalkanes, C7-C10 | DNEL | Long term Dermal | 773 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Inhalation | 2053 mg/m ³ | Workers | Systemic |
| | DNEL | Long term Oral, Dermal | 699 mg/kg bw/day | Consumers | Systemic |
| | DNEL | Long term Inhalation | 608 mg/m ³ | Consumers | Systemic |

PNECs

SECTION 8: Exposure controls/personal protection

| Product/ingredient name | Compartment Detail | Value | Method Detail |
|-------------------------|------------------------|-------------|---------------|
| ethyl acetate | Fresh water | 0,26 mg/l | - |
| | Marine | 0,026 mg/l | - |
| | Fresh water sediment | 0,34 mg/kg | - |
| | Marine water sediment | 0,034 mg/kg | - |
| | Soil | 0,22 mg/kg | - |
| | Sewage Treatment Plant | 650 mg/l | - |
| 1-methoxy-2-propanol | Fresh water | 10 mg/l | - |
| | Fresh water sediment | 41,6 mg/l | - |
| | Marine water sediment | 4,17 mg/l | - |
| | Soil | 2,47 mg/l | - |
| | Sewage Treatment Plant | 100 mg/l | - |
| | | | |

8.2 Exposure controls

Appropriate engineering controls : Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and solvent vapours below the OEL, suitable respiratory protection must be worn.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles. Recommended: safety glasses with side-shields (EN 166).

Skin protection

Hand protection

There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals.

The breakthrough time must be greater than the end use time of the product.

The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.

Gloves should be replaced regularly and if there is any sign of damage to the glove material.

Always ensure that gloves are free from defects and that they are stored and used correctly.

The performance or effectiveness of the glove may be reduced by physical/chemical damage and poor maintenance.

Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.

Gloves : For prolonged or repeated handling, use the following type of gloves:

Recommended: > 8 hours (breakthrough time): gloves , nitrile rubber (0.5mm)

The recommendation for the type or types of glove to use when handling this product is based on information from the following source:

EN 374-3 : 2003

The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment.

SECTION 8: Exposure controls/personal protection

- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods. Recommended: Overalls buttoned to the neck and wrist. (EN 1149-1)
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Recommended: organic vapour (Type AX) and particulate filter (EN 140) .
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties****Appearance**

- Physical state** : Liquid. [Aerosol.]
- Colour** : Various
- Odour** : Hydrocarbon.
- Odour threshold** : Not available.
- pH** : Not available.
- Melting point/freezing point** : Not available.
- Initial boiling point and boiling range** : Not available.
- Flash point** : Closed cup: -40°C
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.
Slightly flammable in the presence of the following materials or conditions: shocks and mechanical impacts.
In use, may form flammable/explosive vapour-air mixture. Vapour may travel a considerable distance to source of ignition and flash back.
- Upper/lower flammability or explosive limits** : Lower: 3%
Upper: 18%
- Vapour pressure** : 420 kPa [room temperature]
- Vapour density** : >1 [Air = 1]
- Relative density** : 0,76 to 0,82
- Solubility(ies)** : Not available.
- Partition coefficient: n-octanol/ water** : Not available.
- Auto-ignition temperature** : 350°C
- Decomposition temperature** : Not available.
- Viscosity** : Not available.

SECTION 9: Physical and chemical properties

- Explosive properties** : Highly explosive in the presence of the following materials or conditions: open flames, sparks and static discharge, heat and shocks and mechanical impacts. Pressurised container: protect from sunlight and do not expose to temperature exceeding 50°C. Do not pierce or burn, even after use. Do not puncture, incinerate or store the container at temperatures above 49°C (120°F) or in direct sunlight. Container explosion may occur under fire conditions or when heated. Bursting aerosol containers may be propelled from a fire at high speed.
- Oxidising properties** : Not available.

9.2 Other information

- Type of aerosol** : Spray
- Heat of combustion** : 23,56 kJ/g

No additional information.

SECTION 10: Stability and reactivity

- 10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- 10.2 Chemical stability** : Stable under recommended storage and handling conditions (see Section 7).
- 10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- 10.4 Conditions to avoid** : When exposed to high temperatures may produce hazardous decomposition products.
- 10.5 Incompatible materials** : Keep away from the following materials to prevent strong exothermic reactions: oxidising agents, strong alkalis, strong acids.
- 10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced. If involved in a fire, toxic gases including CO, CO₂ and smoke can be generated.

SECTION 11: Toxicological information**11.1 Information on toxicological effects****Acute toxicity**

| Product/ingredient name | Result | Species | Dose | Exposure |
|---|------------------------|------------|--------------------------|-----------|
| dimethyl ether | LC50 Inhalation Gas. | Mouse | 386 ppm | 0,5 hours |
| | LC50 Inhalation Gas. | Rat | 308000 mg/m ³ | 1 hours |
| | LC50 Inhalation Gas. | Rat | 164000 ppm | 4 hours |
| | LC50 Inhalation Vapour | Rat | 309 g/m ³ | 4 hours |
| ethyl acetate | LD50 Oral | Rat | 5620 mg/kg | - |
| | LC50 Inhalation Vapour | Rat | 55000 mg/m ³ | 4 hours |
| 1-methoxy-2-propanol | LD50 Dermal | Rabbit | 13 g/kg | - |
| | LD50 Oral | Rat | 6600 mg/kg | - |
| | LC50 Inhalation Vapour | Rat | >21 g/m ³ | 4 hours |
| hydrocarbons, isoalkanes, C7-C10 | LD50 Dermal | Rabbit | >2000 mg/kg | - |
| | LD50 Oral | Rat | >5000 mg/kg | - |
| | LC50 Inhalation Vapour | Rat | >5,3 mg/l | 6 hours |
| 1-isopropyl-2, 2-dimethyltrimethylene diisobutyrate | LD50 Dermal | Guinea pig | >18900 mg/kg | - |
| | LD50 Oral | Mouse | >6400 mg/kg | - |
| | LD50 Oral | Rat | >9600 mg/kg | - |

SECTION 11: Toxicological information

Conclusion/Summary : Based on available data, the classification criteria are not met.

Acute toxicity estimates

Not available.

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|---|-----------------------|------------|-------|----------------------------------|-------------|
| 1-methoxy-2-propanol | Eyes - Mild irritant | Rabbit | - | 24 hours 500 milligrams | - |
| | Skin - Mild irritant | Rabbit | - | 500 milligrams | - |
| hydrocarbons, isoalkanes, C7-C10 | Skin - Mild irritant | Rabbit | - | - | - |
| 1-isopropyl-2, 2-dimethyltrimethylene diisobutryate | Eyes - Mild irritant | Rabbit | - | - | - |
| | Skin - Oedema | Rabbit | 0 | - | - |
| | Eyes - Cornea opacity | Rabbit | 0 | - | - |
| | Skin - Mild irritant | Guinea pig | - | 5 Grams | - |
| | Skin - Mild irritant | Human | - | 504 hours 1 Percent Intermittent | - |

Conclusion/Summary

Skin : Based on available data, the classification criteria are not met.

Eyes : Causes serious eye irritation.

Respiratory : May cause drowsiness or dizziness.

Sensitisation

| Product/ingredient name | Route of exposure | Species | Result |
|---|-------------------|---------|-----------------|
| hydrocarbons, C9-C11, n-/ iso-/ cyclo-alkanes, < 2% aromatics | skin | Rabbit | Not sensitizing |
| hydrocarbons, isoalkanes, C7-C10 | skin | Rabbit | Not sensitizing |

Conclusion/Summary

Skin : Based on available data, the classification criteria are not met.

Respiratory : Based on available data, the classification criteria are not met.

Mutagenicity

| Product/ingredient name | Test | Experiment | Result |
|----------------------------------|----------|-------------------|----------|
| hydrocarbons, isoalkanes, C7-C10 | OECD 471 | Subject: Bacteria | Negative |

Conclusion/Summary : Based on available data, the classification criteria are not met.

Carcinogenicity

Conclusion/Summary : Based on available data, the classification criteria are not met.

Reproductive toxicity

| Product/ingredient name | Maternal toxicity | Fertility | Developmental toxin | Species | Dose | Exposure |
|----------------------------------|-------------------|-----------|---------------------|------------------------------|------------------------------|----------|
| hydrocarbons, isoalkanes, C7-C10 | - | - | Negative | Mammal - species unspecified | Route of exposure unreported | - |

Conclusion/Summary : Based on available data, the classification criteria are not met.

Teratogenicity

Conclusion/Summary : Based on available data, the classification criteria are not met.

SECTION 11: Toxicological information**Specific target organ toxicity (single exposure)**

| Product/ingredient name | Category | Route of exposure | Target organs |
|---|------------|-------------------|------------------|
| ethyl acetate | Category 3 | Not applicable. | Narcotic effects |
| hydrocarbons, C9-C11, n-/ iso-/ cyclo-alkanes, < 2% aromatics | Category 3 | Not applicable. | Narcotic effects |
| 1-methoxy-2-propanol | Category 3 | Not applicable. | Narcotic effects |
| hydrocarbons, isoalkanes, C7-C10 | Category 3 | Not applicable. | Narcotic effects |

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

| Product/ingredient name | Result |
|---|--------------------------------|
| hydrocarbons, C9-C11, n-/ iso-/ cyclo-alkanes, < 2% aromatics | ASPIRATION HAZARD - Category 1 |
| hydrocarbons, isoalkanes, C7-C10 | ASPIRATION HAZARD - Category 1 |

Delayed and immediate effects as well as chronic effects from short and long-term exposure**Short term exposure****Potential immediate effects** : Not available.**Potential delayed effects** : Not available.**Long term exposure****Potential immediate effects** : Not available.**Potential delayed effects** : Not available.**Potential chronic health effects**

Not available.

Conclusion/Summary : Based on available data, the classification criteria are not met.**General** : No known significant effects or critical hazards.**Carcinogenicity** : No known significant effects or critical hazards.**Mutagenicity** : No known significant effects or critical hazards.**Teratogenicity** : No known significant effects or critical hazards.**Developmental effects** : No known significant effects or critical hazards.**Fertility effects** : No known significant effects or critical hazards.**Other information** : Not available.**SECTION 12: Ecological information****12.1 Toxicity**

There are no data available on the mixture itself.
Do not allow to enter drains or watercourses.

The mixture has been assessed following the summation method of the CLP Regulation (EC) No 1272/2008 and is classified for eco-toxicological properties accordingly. See Sections 2 and 3 for details.

SECTION 12: Ecological information

| Product/ingredient name | Result | Species | Exposure |
|--|-------------------------------------|---|----------|
| ethyl acetate | Acute EC50 2500000 µg/l Fresh water | Algae - Selenastrum sp. | 96 hours |
| | Acute LC50 1600000 µg/l Fresh water | Crustaceans - Asellus aquaticus | 48 hours |
| hydrocarbons, C9-C11, n-/iso-/ cyclo-alkanes, < 2% aromatics | Acute LC50 560000 µg/l Fresh water | Daphnia spec. - Daphnia magna | 48 hours |
| | Chronic NOEC mg/l Fresh water | Daphnia spec. - Daphnia magna | 21 days |
| | Acute NOEC 100 mg/l | Algae - Pseudokirchneriella subcapitata | 72 hours |
| | Chronic NOEC 0,23 mg/l | Daphnia spec. | - |
| 1-methoxy-2-propanol | Chronic NOEC 0,131 mg/l | Fish | - |
| | Acute EC50 >1000 mg/l | Algae - Selenastrum capricomutum | 7 days |
| hydrocarbons, isoalkanes, C7-C10 | Acute LC50 23300 mg/l | Daphnia spec. | 96 hours |
| | Acute LC50 20800 mg/l | Fish | 96 hours |
| | Acute EC50 29 mg/l | Algae - Pseudokirchneriella subcapitata | 72 hours |
| | Acute EC50 2,4 mg/l | Daphnia spec. | 48 hours |
| | Acute LC50 18,4 mg/l | Fish | 96 hours |
| | Acute NOEC 6,3 mg/l | Algae - Pseudokirchneriella subcapitata | 72 hours |
| | Chronic NOEC 0,17 mg/l | Daphnia spec. | 21 days |

Conclusion/Summary : Harmful to aquatic life with long lasting effects.

12.2 Persistence and degradability

| Product/ingredient name | Test | Result | Dose | Inoculum |
|--|-----------|--------------------------------|------------------------------|----------|
| ethyl acetate | OECD 301D | 70 % - Readily - 28 days | - | - |
| | OECD 301B | >80 % - Readily - 28 days | - | - |
| hydrocarbons, C9-C11, n-/iso-/ cyclo-alkanes, < 2% aromatics | OECD 301F | >80 % - Readily - 28 days | - | - |
| | OECD 301E | 96 % - Readily - 28 days | - | - |
| | - | >90 % - Readily - 5 days | 1,95 gO ₂ /g ThOD | - |
| 1-methoxy-2-propanol | OECD 301C | 88 to 92 % - Readily - 28 days | - | - |
| | - | 22 % - 28 days | - | - |
| hydrocarbons, isoalkanes, C7-C10 | OECD 301F | >80 % - Readily - 28 days | - | - |
| | - | - | - | - |
| 1-isopropyl-2, 2-dimethyltrimethylene diisobutyrate | OECD 301F | >80 % - Readily - 28 days | - | - |

Conclusion/Summary : This product has not been tested for biodegradation. Based on available data, the classification criteria are not met.

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|--|---------------------------------|-------------------|------------------|
| ethyl acetate | - | - | Readily |
| hydrocarbons, C9-C11, n-/iso-/ cyclo-alkanes, < 2% aromatics | - | 100%; < 28 day(s) | Readily |
| 1-methoxy-2-propanol | Fresh water <28 days, 5 to 25°C | - | Readily |
| hydrocarbons, isoalkanes, C7-C10 | - | - | Inherent |
| 1-isopropyl-2, 2-dimethyltrimethylene diisobutyrate | - | - | Readily |

12.3 Bioaccumulative potential

SECTION 12: Ecological information

| Product/ingredient name | LogP _{ow} | BCF | Potential |
|--|--------------------|------|-----------|
| dimethyl ether | 0,07 | - | low |
| ethyl acetate | 0,68 | 30 | low |
| hydrocarbons, C9-C11, n-/iso-/ cyclo-alkanes, < 2% aromatics | 5 to 6.5 | - | high |
| 1-methoxy-2-propanol | <1 | <100 | low |
| hydrocarbons, isoalkanes, C7-C10 | >3 | - | low |
| 1-isopropyl-2, 2-dimethyltrimethylene diisobutyrate | 4,1 | 5340 | high |

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Mobility : Volatile.

12.5 Results of PBT and vPvB assessment

PBT : Not applicable.

vPvB : Not applicable.

12.6 Other adverse effects : No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance.

13.1 Waste treatment methods**Product**

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : Yes.

Disposal considerations : Do not allow to enter drains or watercourses. Dispose of according to all federal, state and local applicable regulations. If this product is mixed with other wastes, the original waste product code may no longer apply and the appropriate code should be assigned. For further information, contact your local waste authority.

European waste catalogue (EWC)

The European Waste Catalogue classification of this product, when disposed of as waste, is:

| Waste code | Waste designation |
|------------|---|
| 20 01 27* | paint, inks, adhesives and resins containing hazardous substances |

Packaging


Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

SECTION 13: Disposal considerations

Disposal considerations : Using information provided in this safety data sheet, advice should be obtained from the relevant waste authority on the classification of empty containers. Empty containers must be scrapped or reconditioned. Dispose of containers contaminated by the product in accordance with local or national legal provisions.

Special precautions : This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

SECTION 14: Transport information

| | ADR/RID | ADN | IMDG | IATA |
|--|---|--|---|--|
| 14.1 UN number | UN1950 | UN1950 | UN1950 | UN1950 |
| 14.2 UN proper shipping name | Aerosols, flammable [Limited quantity] | Aerosols, flammable [Limited quantity] | Aerosols, flammable [Limited quantity] | Aerosols, flammable |
| 14.3 Transport hazard class(es) | 2 | 2 | 2.1 | 2.1  |
| 14.4 Packing group | - | - | - | - |
| 14.5 Environmental hazards | No. | No. | No. | No. |
| Additional information | <p>Limited quantity: LQ2</p> <p>Remarks: (≤ 1L:) Limited Quantity - ADR/IMDG 3.4</p> <p>ADR Tunnel code: (D)</p> | | <p>Emergency schedules (EmS): F-D + S-U</p> <p>Remarks: Limited Quantity - ADR/IMDG 3.4</p> <p>Marine pollutant : NO</p> | <p>Passenger and Cargo Aircraft Quantity limitation: 75 kg Packaging instructions: 203 Cargo Aircraft Only Quantity limitation: 150 kg Packaging instructions: 203 Limited Quantities - Passenger Aircraft Quantity limitation: 30 kg Packaging instructions: Y 203</p> |

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

Other EU regulations

VOC : The provisions of Directive 2004/42/EC on VOC apply to this product. Refer to the product label and/or technical data sheet for further information.

VOC for Ready-for-Use Mixture : Not available.

Europe inventory : All components are listed or exempted.

Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Aerosol dispensers :

3



Extremely flammable

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

| Category |
|---|
| P3a: Flammable aerosols containing flammable gases or flammable liquids |

National regulations

Industrial use : The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation. The provisions of the national health and safety at work regulations apply to the use of this product at work.

References : EH40/2005 Workplace exposure limits
Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 2015/830

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

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SECTION 15: Regulatory information

Not listed.

[Stockholm Convention on Persistent Organic Pollutants](#)

Not listed.

[Rotterdam Convention on Prior Informed Consent \(PIC\)](#)

Not listed.

[UNECE Aarhus Protocol on POPs and Heavy Metals](#)

Not listed.

CN code : 3208 10 90

UFI Code : 3Q90-A0HW-1009-KUX4

[International lists](#)

[National inventory](#)

| | |
|--------------------------|--|
| Australia | : Not determined. |
| Canada | : Not determined. |
| China | : Not determined. |
| Japan | : Japan inventory (ENCS) : Not determined. Japan inventory (ISHL) : Not determined. |
| Malaysia | : Not determined. |
| New Zealand | : Not determined. |
| Philippines | : Not determined. |
| Republic of Korea | : Not determined. |
| Taiwan | : Not determined. |
| Turkey | : Not determined. |
| United States | : Not determined. |

15.2 Chemical safety assessment : No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

[Abbreviations and acronyms](#)

| |
|--|
| : ATE = Acute Toxicity Estimate |
| : CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008] |
| : DMEL = Derived Minimal Effect Level |
| : DNEL = Derived No Effect Level |
| : EUH statement = CLP-specific Hazard statement |
| : PBT = Persistent, Bioaccumulative and Toxic |
| : PNEC = Predicted No Effect Concentration |
| : RRN = REACH Registration Number |
| : vPvB = Very Persistent and Very Bioaccumulative |

[Procedure used to derive the classification according to Regulation \(EC\) No. 1272/2008 \[CLP/GHS\]](#)

| Classification | Justification |
|-------------------------|-----------------|
| Aerosol 1, H222, H229 | Expert judgment |
| Eye Irrit. 2, H319 | Expert judgment |
| STOT SE 3, H336 | Expert judgment |
| Aquatic Chronic 3, H412 | Expert judgment |

[Full text of H-phrases referred to in sections 2 and 3](#)

SECTION 16: Other information

| | | |
|---|---|--|
| Full text of abbreviated H statements | : H220 H222, H229 H225 H226 H304 H315 H319 H336 H411 H412 | Extremely flammable gas. Extremely flammable aerosol. Pressurised container: May burst if heated. Highly flammable liquid and vapour. Flammable liquid and vapour. May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. May cause drowsiness or dizziness. Toxic to aquatic life with long lasting effects. Harmful to aquatic life with long lasting effects. |
| Full text of classifications [CLP/GHS] | : Aerosol 1, H222, H229 Aquatic Chronic 2, H411 Aquatic Chronic 3, H412 Asp. Tox. 1, H304 EUH066 Eye Irrit. 2, H319 Flam. Gas 1, H220 Flam. Liq. 2, H225 Flam. Liq. 3, H226 Skin Irrit. 2, H315 STOT SE 3, H336 | AEROSOLS - Category 1 LONG-TERM AQUATIC HAZARD - Category 2 LONG-TERM AQUATIC HAZARD - Category 3 ASPIRATION HAZARD - Category 1 Repeated exposure may cause skin dryness or cracking. SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2 FLAMMABLE GASES - Category 1 FLAMMABLE LIQUIDS - Category 2 FLAMMABLE LIQUIDS - Category 3 SKIN CORROSION/IRRITATION - Category 2 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic effects) - Category 3 |

Date of printing : 16/01/2018

Date of issue/ Date of revision : 12/01/2018

Date of previous issue : 12/01/2018

Version : 4

Notice to reader

The information in this Safety Data Sheet is based on the present state of knowledge and current legislation. It provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications. The product should not be used for purposes other than those shown in Section 1 without first referring to the supplier and obtaining written handling instructions. As the specific conditions of use of the product are outside the supplier's control, the user is responsible for ensuring that the requirements of relevant legislation are complied with. The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation.