

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Commission Regulation (EU) 2020/878

## SAFETY DATA SHEET

FRS-40 SEMI-GLOSS BASE GOLD TD042/9593

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

#### 1.1 Product identifier

**Product name** : FRS-40 SEMI-GLOSS BASE GOLD TD042/9593  
**SDS code** : 40929593B

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

| Identified uses                        |
|--|
| Paint. Professional use Industrial use |
| Uses advised against                   |
| All other uses                         |

**Product use** : Solvent borne coating for interior use.

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

MAPAERO SAS  
10, Avenue de la Rijole CS30098  
09103 PAMIERS Cedex  
France

**e-mail address of person responsible for this SDS** : PSRA\_PAMIERS@akzonobel.com

#### 1.4 Emergency telephone number

##### National advisory body/Poison Center

**Telephone number** : +33 (0)1 40 05 48 48

##### Supplier

**Telephone number** : +33 (0)5 34 01 34 01  
+33 (0)5 61 60 23 30

**Hours of operation** :

### 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]

Flam. Liq. 3, H226  
Eye Irrit. 2, H319  
Carc. 2, H351  
STOT SE 3, H336

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.

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## SECTION 2: Hazards identification

### 2.2 Label elements

**Hazard pictograms**



**Signal word**

: Warning

**Hazard statements**

: Flammable liquid and vapor.  
Causes serious eye irritation.  
May cause drowsiness or dizziness.  
Suspected of causing cancer.

**Precautionary statements**

**Prevention**

: Obtain special instructions before use. Wear protective gloves, protective clothing and eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid breathing vapor.

**Response**

: IF exposed or concerned: Get medical advice or attention. IF INHALED: Call a POISON CENTER or doctor if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.

**Storage**

: Store in a well-ventilated place. Keep container tightly closed. Keep cool.

**Disposal**

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

**Hazardous ingredients**

: n-butyl acetate  
4-methylpentan-2-one

**Supplemental label elements**

: Contains 4-morpholinecarbaldehyde, methyl methacrylate and Reaction mass of Bis (1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate. May produce an allergic reaction. Repeated exposure may cause skin dryness or cracking.

**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

**Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII**

: This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Other hazards which do not result in classification**

: None known.

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

| Product/ingredient name  | Identifiers   | %         | Regulation (EC) No. 1272/2008 [CLP]   | Type    |
|--|---|-----------|---|---------|
| n-butyl acetate  | REACH #:<br>01-2119485493-29<br>EC: 204-658-1<br>CAS: 123-86-4<br>Index: 607-025-00-1 | ≥25 - ≤50 | Flam. Liq. 3, H226<br>STOT SE 3, H336<br>EUH066   | [1] [2] |
| 2-methoxy-1-methylethyl acetate  | REACH #:<br>01-2119475791-29<br>EC: 203-603-9<br>CAS: 108-65-6                        | ≥10 - ≤25 | Flam. Liq. 3, H226<br>STOT SE 3, H336   | [1] [2] |
| Reaction mass of ethylbenzene and xylene                               | REACH #:<br>01-2119488216-32<br>EC: 905-588-0   | <10       | Flam. Liq. 3, H226<br>Acute Tox. 4, H312<br>Acute Tox. 4, H332<br>Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>STOT SE 3, H335<br>STOT RE 2, H373<br>Asp. Tox. 1, H304<br>Aquatic Chronic 3, H412 | [1] [2] |
| 4-methylpentan-2-one   | EC: 203-550-1<br>CAS: 108-10-1<br>Index: 606-004-00-4                                 | ≤5        | Flam. Liq. 2, H225<br>Acute Tox. 4, H332<br>Eye Irrit. 2, H319<br>Carc. 2, H351<br>STOT SE 3, H336<br>EUH066  | [1] [2] |
| 2-ethoxy-1-methylethyl acetate   | EC: 259-370-9<br>CAS: 54839-24-6<br>Index: 603-177-00-8                               | ≤3        | Flam. Liq. 3, H226<br>STOT SE 3, H336   | [1]     |
| aromatic hydrocarbons, C9  | REACH #:<br>01-2119455851-35<br>EC: 918-668-5<br>CAS: 128601-23-0                     | <1        | Flam. Liq. 3, H226<br>STOT SE 3, H335<br>STOT SE 3, H336<br>Asp. Tox. 1, H304<br>Aquatic Chronic 2, H411<br>EUH066  | [1]     |
| Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclic, aromatics (2-25%) | REACH #:<br>01-2119458049-33<br>EC: 919-446-0   | <1        | Flam. Liq. 3, H226<br>STOT SE 3, H336<br>STOT RE 1, H372 (inhalation)<br>Asp. Tox. 1, H304<br>Aquatic Chronic 2, H411<br>EUH066   | [1]     |
| 4-morpholinecarbaldehyde   | EC: 224-518-3<br>CAS: 4394-85-8   | ≤0.3      | Skin Sens. 1, H317  | [1]     |
| methyl methacrylate  | REACH #:<br>01-2119452498-28<br>EC: 201-297-1<br>CAS: 80-62-6<br>Index: 607-035-00-6  | ≤0.3      | Flam. Liq. 2, H225<br>Skin Irrit. 2, H315<br>Skin Sens. 1, H317<br>STOT SE 3, H335  | [1] [2] |
| cyclohexanone  | REACH #:<br>01-2119453616-35<br>EC: 203-631-1<br>CAS: 108-94-1<br>Index: 606-010-00-7 | ≤0.1      | Flam. Liq. 3, H226<br>Acute Tox. 4, H332  | [1] [2] |
| cumene   | REACH #:<br>01-2119473983-24  | ≤0.1      | Flam. Liq. 3, H226<br>STOT SE 3, H335   | [1] [2] |

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

|  |  |  |  |
|--|--|--|--|
|  | EC: 202-704-5<br>CAS: 98-82-8<br>Index: 601-024-00-X |  | Asp. Tox. 1, H304<br>Aquatic Chronic 2,<br>H411<br><b>See Section 16 for<br/>the full text of the H<br/>statements declared<br/>above.</b> |
|--|--|--|--|

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  
 [6] Additional disclosure due to company policy

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

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

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Wash skin thoroughly with soap and water or use recognized skin cleanser. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- 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**

## SECTION 4: First aid measures

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 vapor 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.

Contains 4-morpholinecarbaldehyde, methyl methacrylate, Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate. May produce an allergic reaction.

### Over-exposure signs/symptoms

|                     |   |
|---------------------|---|
| <b>Eye contact</b>  | : Adverse symptoms may include the following:<br>pain or irritation<br>watering<br>redness  |
| <b>Inhalation</b>   | : Adverse symptoms may include the following:<br>nausea or vomiting<br>headache<br>drowsiness/fatigue<br>dizziness/vertigo<br>unconsciousness |
| <b>Skin contact</b> | : Adverse symptoms may include the following:<br>irritation<br>dryness<br>cracking  |
| <b>Ingestion</b>    | : No specific data.   |

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

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

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

|                                       |  |
|---------------------------------------|--|
| <b>Suitable extinguishing media</b>   | : Use dry chemical, CO <sub>2</sub> , water spray (fog) or foam. |
| <b>Unsuitable extinguishing media</b> | : Do not use water jet.  |

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

|  |   |
|--|---|
| <b>Hazards from the substance or mixture</b> | : Flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. |
| <b>Hazardous combustion products</b>         | : Decomposition products may include the following materials:<br>carbon dioxide<br>carbon monoxide<br>halogenated compounds<br>metal oxide/oxides   |

## SECTION 5: Firefighting measures

### 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.

## 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. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized 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 spilled 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).

### 6.3 Methods and materials 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.
- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach 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 spilled 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. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 7.1 Precautions for safe handling

## SECTION 7: Handling and storage

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

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

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

### Seveso Directive - Reporting thresholds

#### Danger criteria

| Category | Notification and MAPP threshold | Safety report threshold |
|----------|---------------------------------|-------------------------|
| P5c      | 5000 tonne                      | 50000 tonne             |

### 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  |
|---------------------------------|--|
| n-butyl acetate                 | <b>Ministry of Labor (France, 3/2020). Notes: Indicative limit values (circular)</b><br>STEL: 940 mg/m <sup>3</sup> 15 minutes. Form: Risk for sensitisation<br>STEL: 200 ppm 15 minutes. Form: Risk for sensitisation<br>TWA: 710 mg/m <sup>3</sup> 8 hours. Form: Risk for sensitisation<br>TWA: 150 ppm 8 hours. Form: Risk for sensitisation |
| 2-methoxy-1-methylethyl acetate | <b>Ministry of Labor (France, 10/2016). Absorbed through skin. Notes: Labour Act , Art 4412-149 (Regulatory binding exposure limits)</b><br>STEL: 550 mg/m <sup>3</sup> 15 minutes.<br>STEL: 100 ppm 15 minutes.   |

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## SECTION 8: Exposure controls/personal protection

|  |  |
|--|--|
| Reaction mass of ethylbenzene and xylene | TWA: 275 mg/m <sup>3</sup> 8 hours.<br>TWA: 50 ppm 8 hours.<br><b>Ministry of Labor (France, 3/2020). Absorbed through skin. Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code)</b><br>STEL: 442 mg/m <sup>3</sup> 15 minutes. Form: Risk for sensitisation<br>STEL: 100 ppm 15 minutes. Form: Risk for sensitisation<br>TWA: 221 mg/m <sup>3</sup> 8 hours. Form: Risk for sensitisation<br>TWA: 50 ppm 8 hours. Form: Risk for sensitisation |
| 4-methylpentan-2-one                     | <b>Ministry of Labor (France, 3/2020). Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code)</b><br>STEL: 208 mg/m <sup>3</sup> 15 minutes. Form: Risk for sensitisation<br>STEL: 50 ppm 15 minutes. Form: Risk for sensitisation<br>TWA: 83 mg/m <sup>3</sup> 8 hours. Form: Risk for sensitisation<br>TWA: 20 ppm 8 hours. Form: Risk for sensitisation   |
| methyl methacrylate                      | <b>Ministry of Labor (France, 3/2020). Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code)</b><br>STEL: 410 mg/m <sup>3</sup> 15 minutes. Form: Risk for sensitisation<br>STEL: 100 ppm 15 minutes. Form: Risk for sensitisation<br>TWA: 205 mg/m <sup>3</sup> 8 hours. Form: Risk for sensitisation<br>TWA: 50 ppm 8 hours. Form: Risk for sensitisation   |
| cyclohexanone                            | <b>Ministry of Labor (France, 3/2020). Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code)</b><br>STEL: 81.6 mg/m <sup>3</sup> 15 minutes. Form: Risk for sensitisation<br>STEL: 20 ppm 15 minutes. Form: Risk for sensitisation<br>TWA: 40.8 mg/m <sup>3</sup> 8 hours. Form: Risk for sensitisation<br>TWA: 10 ppm 8 hours. Form: Risk for sensitisation  |
| cumene                                   | <b>Ministry of Labor (France, 3/2020). Absorbed through skin. Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code)</b><br>STEL: 250 mg/m <sup>3</sup> 15 minutes. Form: Risk for sensitisation<br>STEL: 50 ppm 15 minutes. Form: Risk for sensitisation<br>TWA: 100 mg/m <sup>3</sup> 8 hours. Form: Risk for sensitisation<br>TWA: 20 ppm 8 hours. Form: Risk for sensitisation   |

**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

| Product/ingredient name | Type | Exposure             | Value                | Population         | Effects  |
|-------------------------|------|----------------------|----------------------|--------------------|----------|
| n-butyl acetate         | DNEL | Long term Oral       | 3.4 mg/kg bw/day     | General population | Systemic |
|                         | DNEL | Long term Dermal     | 3.4 mg/kg bw/day     | General population | Systemic |
|                         | DNEL | Long term Dermal     | 7 mg/kg bw/day       | Workers            | Systemic |
|                         | DNEL | Long term Inhalation | 12 mg/m <sup>3</sup> | General population | Systemic |
|                         | DNEL | Long term            | 48 mg/m <sup>3</sup> | Workers            | Systemic |

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## SECTION 8: Exposure controls/personal protection

|  |                      |                          |                          |                      |                    |
|--|----------------------|--------------------------|--------------------------|----------------------|--------------------|
| Reaction mass of ethylbenzene and xylene | DNEL                 | Inhalation<br>Long term  | 102.34 mg/m <sup>3</sup> | General population   | Local              |
|  | DNEL                 | Inhalation<br>Long term  | 480 mg/m <sup>3</sup>    | Workers              | Local              |
|  | DNEL                 | Inhalation<br>Short term | 859.7 mg/m <sup>3</sup>  | General population   | Local              |
|  | DNEL                 | Inhalation<br>Short term | 859.7 mg/m <sup>3</sup>  | General population   | Systemic           |
|  | DNEL                 | Inhalation<br>Short term | 960 mg/m <sup>3</sup>    | Workers              | Local              |
|  | DNEL                 | Inhalation<br>Short term | 960 mg/m <sup>3</sup>    | Workers              | Systemic           |
|  | DNEL                 | Oral<br>Long term        | 1.6 mg/kg bw/day         | General population   | Systemic           |
|  | DNEL                 | Inhalation<br>Long term  | 14.8 mg/m <sup>3</sup>   | General population   | Systemic           |
|  | DNEL                 | Inhalation<br>Long term  | 77 mg/m <sup>3</sup>     | Workers              | Systemic           |
|  | 4-methylpentan-2-one | DNEL                     | Dermal<br>Long term      | 108 mg/kg bw/day     | General population |
| DNEL                                     |                      | Dermal<br>Long term      | 180 mg/kg bw/day         | Workers              | Systemic           |
| DNEL                                     |                      | Inhalation<br>Short term | 289 mg/m <sup>3</sup>    | Workers              | Local              |
| DNEL                                     |                      | Inhalation<br>Short term | 289 mg/m <sup>3</sup>    | Workers              | Systemic           |
| DNEL                                     |                      | Oral<br>Long term        | 4.2 mg/kg bw/day         | General population   | Systemic           |
| DNEL                                     |                      | Dermal<br>Long term      | 4.2 mg/kg bw/day         | General population   | Systemic           |
| DNEL                                     |                      | Dermal<br>Long term      | 11.8 mg/kg bw/day        | Workers              | Systemic           |
| DNEL                                     |                      | Inhalation<br>Long term  | 14.7 mg/m <sup>3</sup>   | General population   | Local              |
| DNEL                                     |                      | Inhalation<br>Long term  | 14.7 mg/m <sup>3</sup>   | General population   | Systemic           |
| 2-ethoxy-1-methylethyl acetate           |                      | DNEL                     | Inhalation<br>Long term  | 83 mg/m <sup>3</sup> | Workers            |
|  | DNEL                 | Inhalation<br>Long term  | 83 mg/m <sup>3</sup>     | Workers              | Systemic           |
|  | DNEL                 | Inhalation<br>Short term | 155.2 mg/m <sup>3</sup>  | General population   | Local              |
|  | DNEL                 | Inhalation<br>Short term | 155.2 mg/m <sup>3</sup>  | General population   | Systemic           |
|  | DNEL                 | Inhalation<br>Short term | 208 mg/m <sup>3</sup>    | Workers              | Local              |
|  | DNEL                 | Inhalation<br>Short term | 208 mg/m <sup>3</sup>    | Workers              | Systemic           |
|  | DNEL                 | Oral<br>Long term        | 13.1 mg/kg bw/day        | General population   | Systemic           |
|  | DNEL                 | Dermal<br>Long term      | 62 mg/kg bw/day          | General population   | Systemic           |
|  | DNEL                 | Dermal<br>Long term      | 103 mg/kg bw/day         | Workers              | Systemic           |
|  | DNEL                 | Inhalation<br>Long term  | 181 mg/m <sup>3</sup>    | General population   | Systemic           |
|  | DNEL                 | Inhalation<br>Long term  | 302 mg/m <sup>3</sup>    | Workers              | Systemic           |
|  | DNEL                 | Inhalation<br>Short term | 365 mg/m <sup>3</sup>    | General population   | Systemic           |
|  | DNEL                 | Inhalation<br>Short term | 608 mg/m <sup>3</sup>    | Workers              | Systemic           |
|  | DNEL                 | Inhalation<br>Short term | 608 mg/m <sup>3</sup>    | Workers              | Systemic           |

## SECTION 8: Exposure controls/personal protection

|                          |        |                              |                          |                       |          |
|--------------------------|--------|------------------------------|--------------------------|-----------------------|----------|
| 4-morpholinecarbaldehyde | DNEL   | Inhalation<br>Long term Oral | 8 mg/kg<br>bw/day        | General<br>population | Systemic |
|                          | DNEL   | Long term Dermal             | 8 mg/kg<br>bw/day        | General<br>population | Systemic |
|                          | DNEL   | Long term Dermal             | 14 mg/kg<br>bw/day       | Workers               | Systemic |
| methyl methacrylate      | DNEL   | Long term<br>Inhalation      | 29 mg/m <sup>3</sup>     | General<br>population | Systemic |
|                          | DNEL   | Long term<br>Inhalation      | 98 mg/m <sup>3</sup>     | Workers               | Systemic |
|                          | DNEL   | Long term Dermal             | 8.2 mg/kg<br>bw/day      | General<br>population | Systemic |
|                          | DNEL   | Long term Dermal             | 13.67 mg/<br>kg bw/day   | Workers               | Systemic |
|                          | DNEL   | Long term<br>Inhalation      | 74.3 mg/m <sup>3</sup>   | General<br>population | Systemic |
|                          | DNEL   | Long term<br>Inhalation      | 104 mg/m <sup>3</sup>    | General<br>population | Local    |
| cyclohexanone            | DNEL   | Long term<br>Inhalation      | 208 mg/m <sup>3</sup>    | Workers               | Local    |
|                          | DNEL   | Long term<br>Inhalation      | 208 mg/m <sup>3</sup>    | Workers               | Systemic |
|                          | DNEL   | Short term Dermal            | 1 mg/kg<br>bw/day        | General<br>population | Systemic |
|                          | DNEL   | Long term Dermal             | 1 mg/kg<br>bw/day        | General<br>population | Systemic |
|                          | DNEL   | Short term Oral              | 1.5 mg/kg<br>bw/day      | General<br>population | Systemic |
|                          | DNEL   | Long term Oral               | 1.5 mg/kg<br>bw/day      | General<br>population | Systemic |
|                          | DNEL   | Short term Dermal            | 4 mg/kg<br>bw/day        | Workers               | Systemic |
|                          | DNEL   | Long term Dermal             | 4 mg/kg<br>bw/day        | Workers               | Systemic |
|                          | DNEL   | Long term<br>Inhalation      | 10 mg/m <sup>3</sup>     | General<br>population | Systemic |
|                          | DNEL   | Long term<br>Inhalation      | 20 mg/m <sup>3</sup>     | General<br>population | Local    |
|                          | DNEL   | Short term<br>Inhalation     | 20 mg/m <sup>3</sup>     | General<br>population | Systemic |
|                          | DNEL   | Short term<br>Inhalation     | 40 mg/m <sup>3</sup>     | General<br>population | Local    |
|                          | DNEL   | Long term<br>Inhalation      | 40 mg/m <sup>3</sup>     | Workers               | Local    |
|                          | DNEL   | Long term<br>Inhalation      | 40 mg/m <sup>3</sup>     | Workers               | Systemic |
|                          | cumene | DNEL                         | Short term<br>Inhalation | 80 mg/m <sup>3</sup>  | Workers  |
| DNEL                     |        | Short term<br>Inhalation     | 80 mg/m <sup>3</sup>     | Workers               | Systemic |
| DNEL                     |        | Long term Dermal             | 1.2 mg/kg<br>bw/day      | General<br>population | Systemic |
| DNEL                     |        | Long term Oral               | 5 mg/kg<br>bw/day        | General<br>population | Systemic |
| DNEL                     |        | Long term Dermal             | 15.4 mg/<br>kg bw/day    | Workers               | Systemic |
| DNEL                     |        | Long term<br>Inhalation      | 16.6 mg/m <sup>3</sup>   | General<br>population | Systemic |
| DNEL                     |        | Long term<br>Inhalation      | 100 mg/m <sup>3</sup>    | Workers               | Systemic |
|                          | DNEL   | Short term                   | 250 mg/m <sup>3</sup>    | Workers               | Local    |

## SECTION 8: Exposure controls/personal protection

|  |            |  |  |  |
|--|------------|--|--|--|
|  | Inhalation |  |  |  |
|--|------------|--|--|--|

### PNECs

No PNECs available.

### 8.2 Exposure controls

**Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

### 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.

### Skin protection

**Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

When prolonged or frequently repeated contact may occur, a glove with a protection class of 6 (breakthrough time >480 minutes according to EN374) is recommended. Recommended gloves: Viton ® or Nitrile, thickness ≥ 0.38 mm. When only brief contact is expected, a glove with protection class of 2 or higher (breakthrough time >30 minutes according to EN374) is recommended. Recommended gloves: Nitrile, thickness ≥ 0.12 mm.

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

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

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.

**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.

**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.

## SECTION 8: Exposure controls/personal protection

- 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.
- 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.
- Color** : Gold.
- Odor** : Characteristic.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point/freezing point** : Not available.
- Initial boiling point and boiling range** : Not available.
- Flash point** : Closed cup: 28°C
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Not available.
- Upper/lower flammability or explosive limits** : Not available.
- Vapor pressure** : Not available.
- Vapor density** : Highest known value: 4.6 (Air = 1) (2-methoxy-1-methylethyl acetate).  
Weighted average: 4.03 (Air = 1)
- Density** : 1.063 g/cm<sup>3</sup>
- Solubility(ies)** : Insoluble in the following materials: cold water.
- Partition coefficient: n-octanol/ water** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Viscosity** : Kinematic (room temperature): 9.41 cm<sup>2</sup>/s  
Kinematic (40°C): 1.01 cm<sup>2</sup>/s

## 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** : The product is stable.
- 10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- 10.4 Conditions to avoid** : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
- 10.5 Incompatible materials** : Reactive or incompatible with the following materials:  
oxidizing materials

## SECTION 10: Stability and reactivity

**10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

| Product/ingredient name                      | Result                | Species               | Dose                    | Exposure                |         |
|--|-----------------------|-----------------------|-------------------------|-------------------------|---------|
| n-butyl acetate                              | LC50 Inhalation Gas.  | Rat                   | 390 ppm                 | 4 hours                 |         |
|  | LC50 Inhalation Vapor | Mouse                 | 6 g/m <sup>3</sup>      | 2 hours                 |         |
|  | LD50 Dermal           | Rabbit                | >17600 mg/kg            | -                       |         |
|  | LD50 Intraperitoneal  | Mouse                 | 1230 mg/kg              | -                       |         |
|  | LD50 Oral             | Guinea pig            | 4700 mg/kg              | -                       |         |
|  | LD50 Oral             | Mouse                 | 6 g/kg                  | -                       |         |
|  | LD50 Oral             | Rabbit                | 3200 mg/kg              | -                       |         |
|  | LD50 Oral             | Rat                   | 10768 mg/kg             | -                       |         |
| Reaction mass of ethylbenzene and xylene     | LC50 Inhalation Gas.  | Rat                   | 5000 ppm                | 4 hours                 |         |
|  | 4-methylpentan-2-one  | LD50 Intraperitoneal  | Guinea pig              | 800 mg/kg               | -       |
|  |                       | LD50 Intraperitoneal  | Mouse                   | 268 mg/kg               | -       |
|  |                       | LD50 Intraperitoneal  | Rat                     | 400 mg/kg               | -       |
|  |                       | LD50 Oral             | Guinea pig              | 1600 mg/kg              | -       |
|  |                       | LD50 Oral             | Mouse                   | 1900 mg/kg              | -       |
|  |                       | LD50 Oral             | Mouse                   | 2850 mg/kg              | -       |
|  |                       | LD50 Oral             | Rat                     | 2080 mg/kg              | -       |
| LD50 Oral                                    |                       | Rat                   | 4600 mg/kg              | -                       |         |
| 4-morpholinecarbaldehyde methyl methacrylate | LD50 Oral             | Rat                   | 6500 uL/kg              | -                       |         |
|  | LC50 Inhalation Vapor | Mouse                 | 18500 mg/m <sup>3</sup> | 2 hours                 |         |
|  | LC50 Inhalation Vapor | Rat                   | 78000 mg/m <sup>3</sup> | 4 hours                 |         |
|  | LD50 Dermal           | Rabbit                | >5 g/kg                 | -                       |         |
|  | LD50 Intraperitoneal  | Guinea pig            | 1890 mg/kg              | -                       |         |
|  | LD50 Intraperitoneal  | Mouse                 | 945 mg/kg               | -                       |         |
|  | LD50 Intraperitoneal  | Rat                   | 1328 mg/kg              | -                       |         |
|  | LD50 Oral             | Guinea pig            | 5954 mg/kg              | -                       |         |
|  | LD50 Oral             | Mouse                 | 3625 mg/kg              | -                       |         |
|  | LD50 Oral             | Rabbit                | 8700 mg/kg              | -                       |         |
|  | LD50 Oral             | Rat                   | 7872 mg/kg              | -                       |         |
|  | LD50 Subcutaneous     | Guinea pig            | 5954 mg/kg              | -                       |         |
|  | LD50 Subcutaneous     | Mouse                 | 5954 mg/kg              | -                       |         |
|  | LD50 Subcutaneous     | Rat                   | 7088 mg/kg              | -                       |         |
|  | cyclohexanone         | LC50 Inhalation Gas.  | Rat                     | 8000 ppm                | 4 hours |
|  |                       | LD50 Dermal           | Rabbit                  | 1 mL/kg                 | -       |
| LD50 Intraperitoneal                         |                       | Guinea pig            | 930 mg/kg               | -                       |         |
| LD50 Intraperitoneal                         |                       | Mouse                 | 1230 mg/kg              | -                       |         |
| LD50 Intraperitoneal                         |                       | Mouse                 | 1230 mg/kg              | -                       |         |
| LD50 Intraperitoneal                         |                       | Rabbit                | 1540 mg/kg              | -                       |         |
| LD50 Intraperitoneal                         |                       | Rabbit                | 1540 mg/kg              | -                       |         |
| LD50 Intraperitoneal                         |                       | Rat                   | 1130 mg/kg              | -                       |         |
| LD50 Intraperitoneal                         |                       | Rat                   | 1130 mg/kg              | -                       |         |
| LD50 Oral                                    |                       | Mouse                 | 1400 mg/kg              | -                       |         |
| LD50 Oral                                    |                       | Rat                   | 1800 mg/kg              | -                       |         |
| LD50 Oral                                    |                       | Rat                   | 1620 uL/kg              | -                       |         |
| LD50 Subcutaneous                            |                       | Rat                   | 2170 mg/kg              | -                       |         |
| cumene                                       |                       | LC50 Inhalation Vapor | Mouse                   | 15300 mg/m <sup>3</sup> | 2 hours |
|  | LC50 Inhalation Vapor | Mouse                 | 10 g/m <sup>3</sup>     | 7 hours                 |         |
|  | LC50 Inhalation Vapor | Mouse                 | 10000 mg/m <sup>3</sup> | 7 hours                 |         |
|  | LC50 Inhalation Vapor | Rat                   | 39000 mg/m <sup>3</sup> | 4 hours                 |         |
|  | LD50 Dermal           | Rabbit                | 12300 uL/kg             | -                       |         |
|  | LD50 Oral             | Mouse                 | 12750 mg/kg             | -                       |         |

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**SECTION 11: Toxicological information**

|  |           |     |            |   |
|--|-----------|-----|------------|---|
|  | LD50 Oral | Rat | 2.9 g/kg   | - |
|  | LD50 Oral | Rat | 1400 mg/kg | - |

**Conclusion/Summary** : Not available.

**Irritation/Corrosion**

| Product/ingredient name                  | Result                   | Species | Score | Exposure        | Observation |
|--|--------------------------|---------|-------|-----------------|-------------|
| n-butyl acetate                          | Eyes - Moderate irritant | Rabbit  | -     | 100 mg          | -           |
|  | Skin - Moderate irritant | Rabbit  | -     | 24 hours 500 mg | -           |
| Reaction mass of ethylbenzene and xylene | Eyes - Mild irritant     | Rabbit  | -     | 87 mg           | -           |
|  | Eyes - Severe irritant   | Rabbit  | -     | 24 hours 5 mg   | -           |
|  | Skin - Mild irritant     | Rat     | -     | 8 hours 60 UI   | -           |
|  | Skin - Moderate irritant | Rabbit  | -     | 24 hours 500 mg | -           |
| 4-methylpentan-2-one                     | Skin - Moderate irritant | Rabbit  | -     | 100 %           | -           |
|  | Eyes - Moderate irritant | Rabbit  | -     | 24 hours 100 UI | -           |
|  | Eyes - Severe irritant   | Rabbit  | -     | 40 mg           | -           |
| 4-morpholinecarbaldehyde                 | Skin - Mild irritant     | Rabbit  | -     | 24 hours 500 mg | -           |
|  | Eyes - Mild irritant     | Rabbit  | -     | 24 hours 500 mg | -           |
| cyclohexanone                            | Eyes - Severe irritant   | Rabbit  | -     | 24 hours 250 ug | -           |
|  | Eyes - Severe irritant   | Rabbit  | -     | 20 mg           | -           |
| cumene                                   | Skin - Mild irritant     | Rabbit  | -     | 500 mg          | -           |
|  | Eyes - Mild irritant     | Rabbit  | -     | 24 hours 500 mg | -           |
|  | Eyes - Mild irritant     | Rabbit  | -     | 86 mg           | -           |
|  | Skin - Mild irritant     | Rabbit  | -     | 24 hours 10 mg  | -           |
|  | Skin - Moderate irritant | Rabbit  | -     | 24 hours 100 mg | -           |

**Conclusion/Summary** : Not available.

**Sensitization**

**Conclusion/Summary** : Not available.

**Mutagenicity**

**Conclusion/Summary** : Not available.

**Carcinogenicity**

**Conclusion/Summary** : Not available.

**Reproductive toxicity**

**Conclusion/Summary** : Not available.

**Teratogenicity**

**Conclusion/Summary** : Not available.

**Specific target organ toxicity (single exposure)**

**SECTION 11: Toxicological information**

| Product/ingredient name  | Category   | Route of exposure | Target organs                |
|--|------------|-------------------|------------------------------|
| n-butyl acetate  | Category 3 | -                 | Narcotic effects             |
| 2-methoxy-1-methylethyl acetate  | Category 3 | -                 | Narcotic effects             |
| Reaction mass of ethylbenzene and xylene                               | Category 3 | -                 | Respiratory tract irritation |
| 4-methylpentan-2-one   | Category 3 | -                 | Narcotic effects             |
| 2-ethoxy-1-methylethyl acetate   | Category 3 | -                 | Narcotic effects             |
| aromatic hydrocarbons, C9  | Category 3 | -                 | Respiratory tract irritation |
| Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclic, aromatics (2-25%) | Category 3 | -                 | Narcotic effects             |
| methyl methacrylate  | Category 3 | -                 | Narcotic effects             |
|  |            |                   | Respiratory tract irritation |

**Specific target organ toxicity (repeated exposure)**

| Product/ingredient name  | Category   | Route of exposure | Target organs |
|--|------------|-------------------|---------------|
| Reaction mass of ethylbenzene and xylene                               | Category 2 | -                 | -             |
| Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclic, aromatics (2-25%) | Category 1 | inhalation        | -             |

**Aspiration hazard**

| Product/ingredient name  | Result                         |
|--|--------------------------------|
| Reaction mass of ethylbenzene and xylene                               | ASPIRATION HAZARD - Category 1 |
| aromatic hydrocarbons, C9  | ASPIRATION HAZARD - Category 1 |
| Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclic, aromatics (2-25%) | ASPIRATION HAZARD - Category 1 |

**Information on the likely routes of exposure** : Not available.

**Potential acute health effects**

**Eye contact** : Causes serious eye irritation.

**Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.

**Skin contact** : Defatting to the skin. May cause skin dryness and irritation.

**Ingestion** : Can cause central nervous system (CNS) depression.

**Symptoms related to the physical, chemical and toxicological characteristics**

**Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness

**Inhalation** : Adverse symptoms may include the following:  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness

**Skin contact** : Adverse symptoms may include the following:  
irritation  
dryness  
cracking

**Ingestion** : No specific data.

## SECTION 11: Toxicological information

### Delayed and immediate effects and also 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** : Not available.

**General** : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

**Carcinogenicity** : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

**Mutagenicity** : No known significant effects or critical hazards.

**Reproductive toxicity** : 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 not classified as hazardous to the environment, but contains substance(s) hazardous to the environment. See section 3 for details.

| Product/ingredient name                                       | Result                              | Species  | Exposure |
|---|-------------------------------------|--|----------|
| n-butyl acetate   | Acute LC50 32 mg/l Marine water     | Crustaceans - Artemia salina   | 48 hours |
|   | Acute LC50 100000 µg/l Fresh water  | Fish - Lepomis macrochirus   | 96 hours |
|   | Acute LC50 18000 µg/l Fresh water   | Fish - Pimephales promelas   | 96 hours |
|   | Acute LC50 185000 µg/l Marine water | Fish - Menidia beryllina   | 96 hours |
|   | Acute LC50 62000 µg/l Fresh water   | Fish - Danio rerio   | 96 hours |
|   | Acute LC50 13400 µg/l Fresh water   | Fish - Pimephales promelas   | 96 hours |
| Reaction mass of ethylbenzene and xylene 4-methylpentan-2-one | Acute LC50 505000 µg/l Fresh water  | Fish - Pimephales promelas   | 96 hours |
|   | Acute LC50 540000 µg/l Fresh water  | Fish - Pimephales promelas   | 96 hours |
|   | Acute LC50 537000 µg/l Fresh water  | Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling) | 96 hours |
|   | Chronic NOEC 78 mg/l Fresh water    | Daphnia - Daphnia magna  | 21 days  |
|   | Chronic NOEC 168 mg/l Fresh water   | Fish - Pimephales promelas - Embryo                                    | 33 days  |
| methyl methacrylate   | Acute LC50 191000 µg/l Fresh water  | Fish - Lepomis macrochirus - Juvenile (Fledgling, Hatchling, Weanling) | 96 hours |
|   | Acute LC50 159100 µg/l Fresh water  | Fish - Pimephales promelas   | 96 hours |
|   | Acute LC50 160200 µg/l Fresh water  | Fish - Pimephales promelas   | 96 hours |
|   | Acute LC50 150000 µg/l Fresh water  | Fish - Pimephales promelas - Adult                                     | 96 hours |
|   | Acute LC50 130000 µg/l Fresh water  | Fish - Pimephales promelas -   | 96 hours |

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## SECTION 12: Ecological information

|                                  |                                    |   |          |
|----------------------------------|------------------------------------|---|----------|
| cyclohexanone                    | Acute EC50 32.9 mg/l Fresh water   | Adult<br>Algae - Chlamydomonas reinhardtii - Exponential growth phase | 72 hours |
|                                  | Acute LC50 630000 µg/l Fresh water | Fish - Pimephales promelas  | 96 hours |
| cumene                           | Acute LC50 527000 µg/l Fresh water | Fish - Pimephales promelas  | 96 hours |
|                                  | Acute LC50 732000 µg/l Fresh water | Fish - Pimephales promelas  | 96 hours |
|                                  | Acute EC50 2600 µg/l Fresh water   | Algae - Pseudokirchneriella subcapitata                               | 72 hours |
|                                  | Acute EC50 7.4 mg/l Marine water   | Crustaceans - Artemia sp. - Nauplii                                   | 48 hours |
|                                  | Acute EC50 7.5 mg/l Marine water   | Crustaceans - Artemia sp. - Nauplii                                   | 48 hours |
|                                  | Acute EC50 10.6 mg/l Fresh water   | Daphnia - Daphnia magna - Neonate                                     | 48 hours |
|                                  | Acute EC50 10.6 mg/l Fresh water   | Daphnia - Daphnia magna - Neonate                                     | 48 hours |
|                                  | Acute EC50 11.2 mg/l Fresh water   | Daphnia - Daphnia magna - Neonate                                     | 48 hours |
|                                  | Acute LC50 7.4 mg/l Marine water   | Crustaceans - Artemia sp. - Nauplii                                   | 48 hours |
|                                  | Acute LC50 8 mg/l Marine water     | Crustaceans - Artemia sp. - Nauplii                                   | 48 hours |
|                                  | Acute LC50 20.3 mg/l Fresh water   | Daphnia - Daphnia magna - Neonate                                     | 48 hours |
|                                  | Acute LC50 20.3 mg/l Fresh water   | Daphnia - Daphnia magna - Neonate                                     | 48 hours |
|                                  | Acute LC50 6320 µg/l Fresh water   | Fish - Pimephales promelas  | 96 hours |
| Acute LC50 5100 µg/l Fresh water | Fish - Poecilia reticulata         | 96 hours  |          |
| Acute LC50 2700 µg/l Fresh water | Fish - Oncorhynchus mykiss         | 96 hours  |          |

**Conclusion/Summary** : Not available.

### 12.2 Persistence and degradability

**Conclusion/Summary** : Not available.

### 12.3 Bioaccumulative potential

| Product/ingredient name                  | LogP <sub>ow</sub> | BCF         | Potential |
|--|--------------------|-------------|-----------|
| n-butyl acetate                          | 2.3                | -           | low       |
| 2-methoxy-1-methylethyl acetate          | 1.2                | -           | low       |
| Reaction mass of ethylbenzene and xylene | 3.12               | 8.1 to 25.9 | low       |
| 4-methylpentan-2-one                     | 1.9                | -           | low       |
| 2-ethoxy-1-methylethyl acetate           | 0.76               | -           | low       |
| 4-morpholinecarbaldehyde                 | -                  | <1.9        | low       |
| methyl methacrylate                      | 1.38               | -           | low       |
| cyclohexanone                            | 0.86               | -           | low       |
| cumene                                   | 3.55               | 35.48       | low       |

### 12.4 Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

**Mobility** : Not available.

### 12.5 Results of PBT and vPvB assessment

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**SECTION 12: Ecological information**

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**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. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

**13.1 Waste treatment methods****Product**

- Methods of disposal** : The generation of waste should be avoided or minimized 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** : The classification of the product may meet the criteria for a hazardous waste.
- 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   |
|---------------|---|
| EWC 08 01 11* | waste paint and varnish containing organic solvents or other hazardous substances |

**Packaging**

- Methods of disposal** : The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.
- 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. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

**SECTION 14: Transport information**

|                                     | ADR/RID | IMDG   | IATA   |
|-------------------------------------|---------|--------|--------|
| <b>14.1 UN number</b>               | UN1263  | UN1263 | UN1263 |
| <b>14.2 UN proper shipping name</b> | PAINT   | PAINT  | PAINT  |
|                                     |         |        |        |




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## SECTION 14: Transport information

|                                 |  |  |  |
|---------------------------------|--|--|--|
| 14.3 Transport hazard class(es) | 3<br> | 3<br> | 3<br> |
| 14.4 Packing group              | III  | III  | III  |
| 14.5 Environmental hazards      | No.  | No.  | No.  |

### Additional information

**ADR/RID** : **Viscous liquid exception** This class 3 viscous liquid is not subject to regulation in packagings up to 450 L according to 2.2.3.1.5.1.  
**Tunnel code (D/E)**

**IMDG** : **Emergency schedules F-E, \_S-E\_**  
**Viscous liquid exception** This class 3 viscous liquid is not subject to regulation in packagings up to 450 L according to 2.3.2.5.

**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.

**14.7 Transport in bulk according to IMO instruments** : Not applicable.

## 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 authorization

##### 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 applicable.

**Industrial emissions (integrated pollution prevention and control) - Air** : Not listed

**Industrial emissions (integrated pollution prevention and control) - Water** : Not listed

## SECTION 15: Regulatory information

### Ozone depleting substances (1005/2009/EU)

Not listed.

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

Not listed.

### Seveso Directive

This product is controlled under the Seveso Directive.

### Danger criteria

#### Category

P5c

### National regulations

|  |  |                |
|--|--|----------------|
| <b>Industrial use</b>                                    | : 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. |                |
| <b>Social Security Code, Articles L 461-1 to L 461-7</b> | : n-butyl acetate  | RG 84          |
|  | : Reaction mass of ethylbenzene and xylene   | RG 4bis, RG 84 |
|  | : 4-methylpentan-2-one   | RG 84          |
|  | : methyl methacrylate  | RG 82          |
|  | : cyclohexanone  | RG 84          |
|  | : cumene   | RG 84          |
| <b>Reinforced medical surveillance</b>                   | : Decree n ° 2012-135 of January 30, 2012 relating to the organization of occupational medicine: not applicable  |                |

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol

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.

### Inventory list

**Europe** : 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  
 N/A = Not available

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**SECTION 16: Other information**

PBT = Persistent, Bioaccumulative and Toxic  
 PNEC = Predicted No Effect Concentration  
 RRN = REACH Registration Number  
 SGG = Segregation Group  
 vPvB = Very Persistent and Very Bioaccumulative

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

| Classification   | Justification   |
|--|---|
| Flam. Liq. 3, H226<br>Eye Irrit. 2, H319<br>Carc. 2, H351<br>STOT SE 3, H336 | On basis of test data<br>Calculation method<br>Calculation method<br>Calculation method |

**Full text of abbreviated H statements**

|        |  |
|--------|--|
| H225   | Highly flammable liquid and vapor.                                 |
| H226   | Flammable liquid and vapor.  |
| H304   | May be fatal if swallowed and enters airways.                      |
| H312   | Harmful in contact with skin.                                      |
| H315   | Causes skin irritation.  |
| H317   | May cause an allergic skin reaction.                               |
| H319   | Causes serious eye irritation.                                     |
| H332   | Harmful if inhaled.  |
| H335   | May cause respiratory irritation.                                  |
| H336   | May cause drowsiness or dizziness.                                 |
| H351   | Suspected of causing cancer.                                       |
| H372   | Causes damage to organs through prolonged or repeated exposure.    |
| H373   | May cause damage to organs through prolonged or repeated exposure. |
| 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.              |

**Full text of classifications [CLP/GHS]**

|                   |   |
|-------------------|---|
| Acute Tox. 4      | ACUTE TOXICITY - Category 4                                     |
| Aquatic Chronic 2 | AQUATIC HAZARD (LONG-TERM) - Category 2                         |
| Aquatic Chronic 3 | AQUATIC HAZARD (LONG-TERM) - Category 3                         |
| Asp. Tox. 1       | ASPIRATION HAZARD - Category 1                                  |
| Carc. 2           | CARCINOGENICITY - Category 2                                    |
| Eye Irrit. 2      | SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2                 |
| Flam. Liq. 2      | FLAMMABLE LIQUIDS - Category 2                                  |
| Flam. Liq. 3      | FLAMMABLE LIQUIDS - Category 3                                  |
| Skin Irrit. 2     | SKIN CORROSION/IRRITATION - Category 2                          |
| Skin Sens. 1      | SKIN SENSITIZATION - Category 1                                 |
| STOT RE 1         | SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1 |
| STOT RE 2         | SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 |
| STOT SE 3         | SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 3   |

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## SECTION 16: Other information

### FOR PROFESSIONAL USE ONLY

**IMPORTANT NOTE** The information in this data sheet is not intended to be exhaustive and is based on the present state of our knowledge and on current laws: any person using the product for any purpose other than that specifically recommended in the technical data sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at his own risk. It is always the responsibility of the user to take all necessary steps to fulfill the demands set out in the local rules and legislation. Always read the Material Data Sheet and the Technical Data Sheet for this product if available. All advice we give or any statement made about the product by us (whether in this data sheet or otherwise) is correct to the best of our knowledge but we have no control over the quality or the condition of the substrate or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing otherwise, we do not accept any liability whatsoever for the performance of the product or for any loss or damage arising out of the use of the product. All products supplied and technical advice given are subject to our standard terms and conditions of sale. You should request a copy of this document and review it carefully. The information contained in this data sheet is subject to modification from time to time in the light of experience and our policy of continuous development. It is the user's responsibility to verify that this data sheet is current prior to using the product.

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