



# SAFETY DATA SHEET

2100 Hard-Hat® Series Metallic Finishes

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

### 1.1 Product identifier

**Product name** : 2100 Hard-Hat® Series Metallic Finishes  
**Product description** : Paint. Aerosol.  
**Product type** : Aerosol.

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

| Identified uses                                                                                                                                                                                                                                             |        |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| Industrial uses: Uses of substances as such or in preparations* at industrial sites<br>Consumer uses: Private households (= general public = consumers)<br>Professional uses: Public domain (administration, education, entertainment, services, craftsmen) |        |
| Uses advised against                                                                                                                                                                                                                                        | Reason |
| None identified.                                                                                                                                                                                                                                            | -      |

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

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

**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]

Flam. Aerosol 1, H222  
Skin Irrit. 2, H315  
Eye Irrit. 2, H319  
STOT SE 3, H335  
STOT RE 2, H373  
Aquatic Chronic 3, H412

#### Classification according to Directive 1999/45/EC [DPD]

The product is classified as dangerous according to Directive 1999/45/EC and its amendments.

**Classification** : F; R11  
Xn; R20/21, R48/20  
Xi; R36/37/38  
R52/53

## SECTION 2: Hazards identification

**Physical/chemical hazards** : Highly flammable.

**Human health hazards** : Harmful by inhalation and in contact with skin. Harmful: danger of serious damage to health by prolonged exposure through inhalation. Irritating to eyes, respiratory system and skin.

**Environmental hazards** : Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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

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

### 2.2 Label elements

**Hazard pictograms** :



**Signal word** : Danger

**Hazard statements** : Extremely flammable aerosol.  
Causes serious eye irritation.  
Causes skin irritation.  
May cause respiratory irritation.  
May cause damage to organs through prolonged or repeated exposure.  
Harmful to aquatic life with long lasting effects.

### Precautionary statements

**General** : If medical advice is needed, have product container or label at hand. Read label before use.

**Prevention** : Do not spray on an open flame or other ignition source. Wear protective gloves and eye protection: gloves : nitrile rubber - Safety glasses with side shields. Use only outdoors or in a well-ventilated area. Do not breathe vapour or spray.

**Response** : IF ON SKIN: Wash with plenty of soap and water. 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 attention.

**Storage** : Store locked up.

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

**Supplemental label elements** : Pressurized container: may burst if heated. Keep away from heat, sparks, open flames and hot surfaces. - No smoking. Pressurized container: Do not pierce or burn, even after use. Protect from sunlight and do not expose to temperatures exceeding 50 °C. Keep out of reach of children.

**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** : Yes, applicable.

### 2.3 Other hazards

**Other hazards which do not result in classification** : None known.

## SECTION 3: Composition/information on ingredients

Substance/mixture : Mixture

| Product/ingredient name       | Identifiers                                                                          | %        | Classification                                                    |                                                                                                                                                                                                                      | Type    |
|-------------------------------|--------------------------------------------------------------------------------------|----------|-------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
|                               |                                                                                      |          | 67/548/EEC                                                        | Regulation (EC) No. 1272/2008 [CLP]                                                                                                                                                                                  |         |
| dimethyl ether                | EC: 204-065-8<br>CAS: 115-10-6<br>Index: 603-019-00-8                                | 50 - <75 | F+; R12                                                           | Flam. Gas 1, H220                                                                                                                                                                                                    | [2]     |
| xylene (mixture of isomeres)  | REACH #:<br>01-2119488216-32<br>EC: 215-535-7<br>CAS: 1330-20-7                      | 25 - <35 | R10<br>Xn; R20/21, R48/20, R65<br>Xi; R36/37/38                   | 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>Flam. Sol. 1, H228<br>Water-react. 2, H261 | [1] [2] |
| aluminium powder (stabilized) | EC: 231-072-3<br>CAS: 7429-90-5<br>Index: 013-002-00-1                               | 5 - <10  | F; R11, R15                                                       | Flam. Liq. 3, H226<br>STOT SE 3, H335 and H336<br>Asp. Tox. 1, H304<br>Aquatic Chronic 2, H411                                                                                                                       | [2]     |
| hydrocarbons, aromatic, C9    | REACH #:<br>01-2119455851-35<br>EC: 918-668-5<br>Index: 649-356-00-4                 | 2,5 - <5 | R10<br>Xn; R65<br>Xi; R37<br>R66, R67<br>N; R51/53                | Flam. Liq. 3, H226<br>STOT SE 3, H335 and H336<br>Asp. Tox. 1, H304<br>Aquatic Chronic 2, H411                                                                                                                       | [1]     |
| butan-1-ol                    | REACH #:<br>01-2119484630-38<br>EC: 200-751-6<br>CAS: 71-36-3<br>Index: 603-004-00-6 | 1 - <3   | R10<br>Xn; R22<br>Xi; R41, R37/38<br>R67                          | Flam. Liq. 3, H226<br>Acute Tox. 4, H302<br>Skin Irrit. 2, H315<br>Eye Dam. 1, H318<br>STOT SE 3, H335 and H336                                                                                                      | [1] [2] |
|                               |                                                                                      |          | See Section 16 for the full text of the R-phrases declared above. | 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 or vPvBs 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

- |                                   |                                                                                                                                                                                                                                                                                                                |
|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>General</b>                    | : 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.                                                                                                          |
| <b>Eye contact</b>                | : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention.                                                                                                                                          |
| <b>Inhalation</b>                 | : 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.                                                                                                               |
| <b>Skin contact</b>               | : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners.                                                                                                                                                           |
| <b>Ingestion</b>                  | : If swallowed, seek medical advice immediately and show the container or label. Keep person warm and at rest. Do NOT induce vomiting.                                                                                                                                                                         |
| <b>Protection of first-aiders</b> | : 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. 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.

### 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.                                                                                                    |

See toxicological information (Section 11)

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

- |                                       |                                                                                |
|---------------------------------------|--------------------------------------------------------------------------------|
| <b>Suitable extinguishing media</b>   | : Recommended: alcohol-resistant foam, CO <sub>2</sub> , powders, water spray. |
| <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>    | : Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard.                      |
| <b>Hazardous thermal decomposition products</b> | : Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen. |

## SECTION 5: Firefighting measures

### 5.3 Advice for firefighters

- Special protective actions for fire-fighters** : Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or watercourses.
- Special protective equipment for fire-fighters** : Appropriate breathing apparatus may be required.
- 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** : Exclude sources of ignition and ventilate the area. Avoid breathing vapour or mist. Refer to protective measures listed in sections 7 and 8.
- 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

- : Do not allow to enter drains or watercourses. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.

### 6.3 Methods and materials for containment and cleaning up

- : 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 (see Section 13). Preferably clean with a detergent. Avoid using solvents.

### 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

### 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,

## SECTION 7: Handling and storage

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.

### 7.3 Specific end use(s)

#### Recommendations

: Not available.

#### Industrial sector specific solutions

: Not available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

| Product/ingredient name       | Exposure limit values                                                                                                                                                                                               |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| dimethyl ether                | <b>EH40/2005 WELs (United Kingdom (UK), 12/2011).</b><br>STEL: 958 mg/m <sup>3</sup> 15 minutes.<br>STEL: 500 ppm 15 minutes.<br>TWA: 766 mg/m <sup>3</sup> 8 hours.<br>TWA: 400 ppm 8 hours.                       |
| xylene (mixture of isomeres)  | <b>EH40/2005 WELs (United Kingdom (UK), 12/2011). Absorbed through skin.</b><br>STEL: 441 mg/m <sup>3</sup> 15 minutes.<br>STEL: 100 ppm 15 minutes.<br>TWA: 220 mg/m <sup>3</sup> 8 hours.<br>TWA: 50 ppm 8 hours. |
| aluminium powder (stabilized) | <b>EH40/2005 WELs (United Kingdom (UK), 12/2011).</b><br>TWA: 10 mg/m <sup>3</sup> 8 hours. Form: inhalable dust<br>TWA: 4 mg/m <sup>3</sup> 8 hours. Form: respirable dust                                         |
| butan-1-ol                    | <b>EH40/2005 WELs (United Kingdom (UK), 12/2011). Absorbed through skin.</b><br>STEL: 154 mg/m <sup>3</sup> 15 minutes.<br>STEL: 50 ppm 15 minutes.                                                                 |

#### 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

## SECTION 8: Exposure controls/personal protection

documents for methods for the determination of hazardous substances will also be required.

### DNELs/DMELs

| Product/ingredient name | Type | Exposure             | Value                 | Population | Effects  |
|-------------------------|------|----------------------|-----------------------|------------|----------|
| butan-1-ol              | DNEL | Long term Inhalation | 310 mg/m <sup>3</sup> | Workers    | Local    |
|                         | DNEL | Long term Inhalation | 55 mg/m <sup>3</sup>  | Consumers  | Local    |
|                         | DNEL | Long term Oral       | 3,125 mg/kg bw/day    | Consumers  | Systemic |
|                         | DNEL | Long term Oral       | 3,125 mg/kg bw/day    | Consumers  | Systemic |

### PNECs

| Product/ingredient name | Compartment Detail     | Value        | Method Detail |
|-------------------------|------------------------|--------------|---------------|
| butan-1-ol              | Fresh water            | 0,082 mg/l   | -             |
|                         | Marine                 | 0,0082 mg/l  | -             |
|                         | Fresh water sediment   | 0,178 mg/kg  | -             |
|                         | Marine water sediment  | 0,0178 mg/kg | -             |
|                         | Soil                   | 0,015 mg/kg  | -             |
|                         | Sewage Treatment Plant | 2476 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 glasses with side shields. (EN166)

### 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: nitrile rubber

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

## SECTION 8: Exposure controls/personal protection

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** : Personnel should wear antistatic clothing made of natural fibres or of high-temperature-resistant synthetic fibres. (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** : If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators.

Dry sanding, flame cutting and/or welding of the dry paint film will give rise to dust and/or hazardous fumes. Wet sanding/flattening should be used wherever possible. If exposure cannot be avoided by the provision of local exhaust ventilation, suitable respiratory protective equipment should be used.

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: organic vapour (Type AX) and particulate filter (EN 140) .

- Environmental exposure controls** : Do not allow to enter drains or watercourses.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

- Physical state** : Liquid. [Aerosol.]
- Colour** : Various
- Odour** : Hydrocarbon.
- 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.
- Burning time** : Not applicable.
- Burning rate** : Not applicable.
- Upper/lower flammability or explosive limits** : Lower: 3%  
Upper: 18%
- Vapour pressure** : 420 kPa [room temperature]
- Vapour density** : >1 [Air = 1]
- Relative density** : 0,8
- Solubility(ies)** : Not available.
- Solubility in water** : Not available.
- Partition coefficient: n-octanol/ water** : Not available.
- Auto-ignition temperature** : 350°C

## SECTION 9: Physical and chemical properties

- Decomposition temperature** : Not available.
- Viscosity** : Not available.
- 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

#### Aerosol product

- Type of aerosol** : Spray
- Heat of combustion** : -16,1 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, CO<sub>2</sub> and smoke can be generated.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

There are no data available on the mixture itself. 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.

#### Acute toxicity

## SECTION 11: Toxicological information

| 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 <sup>3</sup> | 1 hours   |
|                              | LC50 Inhalation Gas.   | Rat     | 164000 ppm               | 4 hours   |
|                              | LC50 Inhalation Vapour | Rat     | 309 g/m <sup>3</sup>     | 4 hours   |
| xylene (mixture of isomeres) | LC50 Inhalation Gas.   | Rat     | 5000 ppm                 | 4 hours   |
|                              | LC50 Inhalation Gas.   | Rat     | 6670 ppm                 | 4 hours   |
|                              | LD50 Oral              | Rat     | 4300 mg/kg               | -         |
|                              | TDLo Dermal            | Rabbit  | 4300 mg/kg               | -         |
| hydrocarbons, aromatic, C9   | LD50 Oral              | Mouse   | 8400 mg/kg               | -         |
|                              | LD50 Oral              | Rat     | 8400 mg/kg               | -         |
| butan-1-ol                   | LC50 Inhalation Vapour | Rat     | 25 mg/l                  | 4 hours   |
|                              | LC50 Inhalation Vapour | Rat     | 24000 mg/m <sup>3</sup>  | 4 hours   |
|                              | LC50 Inhalation Vapour | Rat     | 8000 ppm                 | 4 hours   |
|                              | LD50 Dermal            | Rabbit  | 3400 mg/kg               | -         |
|                              | LD50 Oral              | Rat     | 0,79 g/kg                | -         |

**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 |
|------------------------------|--------------------------|---------|-------|--------------------------|-------------|
| xylene (mixture of isomeres) | Eyes - Mild irritant     | Rabbit  | -     | 87 milligrams            | -           |
|                              | Eyes - Severe irritant   | Rabbit  | -     | 24 hours 5 milligrams    | -           |
|                              | Skin - Mild irritant     | Rat     | -     | 8 hours 60 microliters   | -           |
|                              | Skin - Moderate irritant | Rabbit  | -     | 24 hours 500 milligrams  | -           |
| hydrocarbons, aromatic, C9   | Skin - Moderate irritant | Rabbit  | -     | 100 Percent              | -           |
|                              | Eyes - Mild irritant     | Rabbit  | -     | 24 hours 100 microliters | -           |
| butan-1-ol                   | Eyes - Severe irritant   | Rabbit  | -     | 24 hours 2 milligrams    | -           |
|                              | Eyes - Severe irritant   | Rabbit  | -     | 0.005 Milliliters        | -           |
|                              | Skin - Moderate irritant | Rabbit  | -     | 24 hours 20 milligrams   | -           |

### Conclusion/Summary

**Skin** : Causes skin irritation.

**Eyes** : Causes serious eye irritation.

**Respiratory** : May cause respiratory irritation.  
May cause damage to organs through prolonged or repeated exposure if inhaled.

### Sensitisation

### 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, aromatic, C9 | OECD 471                                 | Subject: Bacteria | Negative |
| butan-1-ol                 | OECD 471 Bacterial Reverse Mutation Test | 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.

**SECTION 11: Toxicological information****Reproductive toxicity**

| Product/ingredient name    | Maternal toxicity | Fertility | Developmental toxin | Species                      | Dose       | Exposure |
|----------------------------|-------------------|-----------|---------------------|------------------------------|------------|----------|
| hydrocarbons, aromatic, C9 | -                 | -         | Negative            | Mammal - species unspecified | 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.

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

| Product/ingredient name      | Category   | Route of exposure | Target organs                                     |
|------------------------------|------------|-------------------|---------------------------------------------------|
| xylene (mixture of isomeres) | Category 3 | Not applicable.   | Respiratory tract irritation                      |
| hydrocarbons, aromatic, C9   | Category 3 | Not applicable.   | Respiratory tract irritation and Narcotic effects |
| butan-1-ol                   | Category 3 | Not applicable.   | Respiratory tract irritation and Narcotic effects |

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

| Product/ingredient name      | Category   | Route of exposure | Target organs  |
|------------------------------|------------|-------------------|----------------|
| xylene (mixture of isomeres) | Category 2 | Not determined    | Not determined |

**Aspiration hazard**

| Product/ingredient name      | Result                         |
|------------------------------|--------------------------------|
| xylene (mixture of isomeres) | ASPIRATION HAZARD - Category 1 |
| hydrocarbons, aromatic, C9   | ASPIRATION HAZARD - Category 1 |

**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.

| Product/ingredient name       | Result                                                                             | Species                                                                                                 | Exposure             |
|-------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|----------------------|
| aluminium powder (stabilized) | Acute LC50 260 to 310 µg/l Fresh water<br>Chronic NOEC 9 mg/l Fresh water          | Fish - Ctenopharyngodon idella - Fry<br>Aquatic plants - Ceratophyllum demersum                         | 96 hours<br>3 days   |
| butan-1-ol                    | Acute EC50 2072 to 1983000 µg/l Fresh water<br>Acute LC50 1940000 µg/l Fresh water | Daphnia spec. - Daphnia magna<br>Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling) | 48 hours<br>96 hours |

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

**12.2 Persistence and degradability**

| Product/ingredient name      | Test      | Result                    | Dose | Inoculum |
|------------------------------|-----------|---------------------------|------|----------|
| xylene (mixture of isomeres) | -         | 90 % - Readily - 5 days   | -    | -        |
| butan-1-ol                   | OECD 301B | >70 % - Readily - 19 days | -    | -        |

## SECTION 12: Ecological information

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

| Product/ingredient name      | Aquatic half-life | Photolysis | Biodegradability |
|------------------------------|-------------------|------------|------------------|
| xylene (mixture of isomeres) | -                 | -          | Readily          |
| hydrocarbons, aromatic, C9   | -                 | -          | Readily          |
| butan-1-ol                   | -                 | -          | Readily          |

### 12.3 Bioaccumulative potential

| Product/ingredient name      | LogP <sub>ow</sub> | BCF | Potential |
|------------------------------|--------------------|-----|-----------|
| dimethyl ether               | 0,1                | -   | low       |
| xylene (mixture of isomeres) | 3,16               | -   | low       |
| hydrocarbons, aromatic, C9   | 3.7 to 4.5         | -   | high      |
| butan-1-ol                   | 0,8                | -   | low       |

### 12.4 Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : 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

### 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 dangerous 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. Not emptied containers are hazardous waste.

|                                       |                                                             |
|---------------------------------------|-------------------------------------------------------------|
| <b>Type of packaging</b><br>Spraycans | <b>European waste catalogue (EWC)</b><br>20 01 22 spraycans |
|---------------------------------------|-------------------------------------------------------------|

**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                                                                                                                        | IMDG                                                                                                     | IATA                                                                                                                                                                                                                                                                                                          |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>14.1 UN number</b>                  | UN 1950                                                                                                                        | UN 1950                                                                                                  | UN 1950                                                                                                                                                                                                                                                                                                       |
| <b>14.2 UN proper shipping name</b>    | AEROSOLS, flammable [Limited quantity]                                                                                         | Aerosols [ Limited quantity]                                                                             | Aerosols [ Limited quantity]                                                                                                                                                                                                                                                                                  |
| <b>14.3 Transport hazard class(es)</b> | 2                                                                                                                              | 2.1                                                                                                      | 2.1<br>                                                                                                                                                                                                                    |
| <b>14.4 Packing group</b>              | -                                                                                                                              | -                                                                                                        | -                                                                                                                                                                                                                                                                                                             |
| <b>14.5 Environmental hazards</b>      | No.                                                                                                                            | No.                                                                                                      | No.                                                                                                                                                                                                                                                                                                           |
| <b>Additional information</b>          | <b>Limited quantity:</b><br>LQ2<br><br><b>Remarks:</b><br>(≤ 1L: ) Limited Quantity - ADR/IMDG 3.4<br><br>ADR Tunnel code: (D) | <b>Emergency schedules (EmS):</b><br>F-D + S-U<br><br><b>Remarks:</b><br>Limited Quantity - ADR/IMDG 3.4 | <b>Passenger and Cargo Aircraft</b><br>Quantity limitation: 75 kg<br>Packaging instructions: 203<br><b>Cargo Aircraft Only</b><br>Quantity limitation: 150 kg<br>Packaging instructions: 203<br><b>Limited Quantities - Passenger Aircraft</b><br>Quantity limitation: 30 kg<br>Packaging instructions: Y 203 |

**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

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.

**CN code** : 3208 10 90

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

**Annex XIV - List of substances subject to authorisation**

**Annex XIV**

None of the components are listed.

**SECTION 15: Regulatory information**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 for Ready-for-Use Mixture** : Not available.

**Europe inventory** : All components are listed or exempted.

**Integrated pollution prevention and control list (IPPC) - Air** : Listed

**Integrated pollution prevention and control list (IPPC) - Water** : Listed

**Aerosol dispensers** :

3

Extremely flammable

National regulations

**15.2 Chemical Safety Assessment** : This product contains substances for which Chemical Safety Assessments are still required.

**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   |
|-------------------------|-----------------|
| Flam. Aerosol 1, H222   | Expert judgment |
| Skin Irrit. 2, H315     | Expert judgment |
| Eye Irrit. 2, H319      | Expert judgment |
| STOT SE 3, H335         | Expert judgment |
| STOT RE 2, H373         | Expert judgment |
| Aquatic Chronic 3, H412 | Expert judgment |

## SECTION 16: Other information

|                                               |   |                                                                                                       |                                                                                                                   |
|-----------------------------------------------|---|-------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Full text of abbreviated H statements</b>  | : | H220                                                                                                  | Extremely flammable gas.                                                                                          |
|                                               |   | H222                                                                                                  | Extremely flammable aerosol.                                                                                      |
|                                               |   | H226                                                                                                  | Flammable liquid and vapour.                                                                                      |
|                                               |   | H228                                                                                                  | Flammable solid.                                                                                                  |
|                                               |   | H261                                                                                                  | In contact with water releases flammable gases.                                                                   |
|                                               |   | H302                                                                                                  | Harmful if swallowed.                                                                                             |
|                                               |   | H304                                                                                                  | May be fatal if swallowed and enters airways.                                                                     |
|                                               |   | H312                                                                                                  | Harmful in contact with skin.                                                                                     |
|                                               |   | H315                                                                                                  | Causes skin irritation.                                                                                           |
|                                               |   | H318                                                                                                  | Causes serious eye damage.                                                                                        |
|                                               |   | H319                                                                                                  | Causes serious eye irritation.                                                                                    |
|                                               |   | H332                                                                                                  | Harmful if inhaled.                                                                                               |
|                                               |   | H335                                                                                                  | May cause respiratory irritation.                                                                                 |
|                                               |   | H335                                                                                                  | May cause respiratory irritation. May cause drowsiness or dizziness.                                              |
|                                               |   | and                                                                                                   |                                                                                                                   |
|                                               |   | H336                                                                                                  |                                                                                                                   |
|                                               |   | 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.                                                                |
| <b>Full text of classifications [CLP/GHS]</b> | : | Acute Tox. 4, H302                                                                                    | ACUTE TOXICITY: ORAL - Category 4                                                                                 |
|                                               |   | Acute Tox. 4, H312                                                                                    | ACUTE TOXICITY: SKIN - Category 4                                                                                 |
|                                               |   | Acute Tox. 4, H332                                                                                    | ACUTE TOXICITY: INHALATION - Category 4                                                                           |
|                                               |   | Aquatic Chronic 2, H411                                                                               | AQUATIC TOXICITY (CHRONIC) - Category 2                                                                           |
|                                               |   | Aquatic Chronic 3, H412                                                                               | AQUATIC TOXICITY (CHRONIC) - Category 3                                                                           |
|                                               |   | Asp. Tox. 1, H304                                                                                     | ASPIRATION HAZARD - Category 1                                                                                    |
|                                               |   | Eye Dam. 1, H318                                                                                      | SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1                                                                   |
|                                               |   | Eye Irrit. 2, H319                                                                                    | SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2                                                                   |
|                                               |   | Flam. Aerosol 1, H222                                                                                 | FLAMMABLE AEROSOLS - Category 1                                                                                   |
|                                               |   | Flam. Gas 1, H220                                                                                     | FLAMMABLE GASES - Category 1                                                                                      |
|                                               |   | Flam. Liq. 3, H226                                                                                    | FLAMMABLE LIQUIDS - Category 3                                                                                    |
|                                               |   | Flam. Sol. 1, H228                                                                                    | FLAMMABLE SOLIDS - Category 1                                                                                     |
|                                               |   | Skin Irrit. 2, H315                                                                                   | SKIN CORROSION/IRRITATION - Category 2                                                                            |
|                                               |   | STOT RE 2, H373                                                                                       | SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2                                                   |
|                                               |   | STOT SE 3, H335                                                                                       | SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) [Respiratory tract irritation] - Category 3                      |
|                                               |   | STOT SE 3, H335 and H336                                                                              | SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) [Respiratory tract irritation and Narcotic effects] - Category 3 |
|                                               |   | Water-react. 2, H261                                                                                  | SUBSTANCES AND MIXTURES, WHICH IN CONTACT WITH WATER, EMIT FLAMMABLE GASES - Category 2                           |
| <b>Full text of abbreviated R phrases</b>     | : | R12- Extremely flammable.                                                                             |                                                                                                                   |
|                                               |   | R11- Highly flammable.                                                                                |                                                                                                                   |
|                                               |   | R15- Contact with water liberates extremely flammable gases.                                          |                                                                                                                   |
|                                               |   | R10- Flammable.                                                                                       |                                                                                                                   |
|                                               |   | R22- Harmful if swallowed.                                                                            |                                                                                                                   |
|                                               |   | R20/21- Harmful by inhalation and in contact with skin.                                               |                                                                                                                   |
|                                               |   | R48/20- Harmful: danger of serious damage to health by prolonged exposure through inhalation.         |                                                                                                                   |
|                                               |   | R65- Harmful: may cause lung damage if swallowed.                                                     |                                                                                                                   |
|                                               |   | R41- Risk of serious damage to eyes.                                                                  |                                                                                                                   |
|                                               |   | R37- Irritating to respiratory system.                                                                |                                                                                                                   |
|                                               |   | R37/38- Irritating to respiratory system and skin.                                                    |                                                                                                                   |
|                                               |   | R36/37/38- Irritating to eyes, respiratory system and skin.                                           |                                                                                                                   |
|                                               |   | R66- Repeated exposure may cause skin dryness or cracking.                                            |                                                                                                                   |
|                                               |   | R67- Vapours may cause drowsiness and dizziness.                                                      |                                                                                                                   |
|                                               |   | R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.   |                                                                                                                   |
|                                               |   | R52/53- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. |                                                                                                                   |

## SECTION 16: Other information

**Full text of classifications [DSD/DPD]** : F+ - Extremely flammable  
F - Highly flammable  
Xn - Harmful  
Xi - Irritant  
N - Dangerous for the environment

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### Notice to reader

***The information in this SDS is based on the present state of our knowledge and on current laws. The product is not to be used for purposes other than those specified under section 1 without first obtaining written handling instructions. It is always the responsibility of the user to take all necessary steps to fulfil the demands set out in the local rules and legislation. The information in this SDS is meant to be a description of the safety requirements for our product. It is not to be considered a guarantee of the product's properties.***