# SAFETY DATA SHEET

Date of issue/Date of revision

: 2 November 2022

: 13.02 Version

Europe

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

**1.1 Product identifier** 

| name | : | SIGMALINE 2500 HARDENER |
|------|---|-------------------------|
| name |   | SIGWALINE 2000 HARDENER |

Product code

**Product** 

: 00195815 Other means of identification

Not available.

| 1.2 Relevant identified uses of the substance or mixture and uses advised against |   |  |  |
|---|---|--|--|
| Product use   | : Professional applications, Used by spraying.                    |  |  |
| Use of the substance/<br>mixture  | : Coating.  |  |  |
| Uses advised against  | : Product is not intended, labelled or packaged for consumer use. |  |  |

# 1.3 Details of the supplier of the safety data sheet

PPG Coatings Belgium BV/SRL Tweemontstraat 104 B-2100 Deurne Belgium Telephone +32-33606311 Fax +32-33606435

e-mail address of person responsible for this SDS

: Product.Stewardship.EMEA@ppg.com

# 1.4 Emergency telephone number

## **Supplier**

+31 20 4075210

# **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] Acute Tox. 4, H302 Acute Tox. 4, H332 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Repr. 2. H361d Aquatic Chronic 2, H411 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.

English (GB)

Europe

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| SIGMALINE 2500 HARDENER |                                |                   |

# **SECTION 2: Hazards identification**

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

## 2.2 Label elements

| Hazard pictograms   |  |
|---|--|
| Signal word   | : Danger   |
| Hazard statements   | <ul> <li>Harmful if swallowed or if inhaled.</li> <li>Causes severe skin burns and eye damage.</li> <li>May cause an allergic skin reaction.</li> <li>Suspected of damaging the unborn child.</li> <li>Toxic to aquatic life with long lasting effects.</li> </ul> |
| Precautionary statements  |  |
| Prevention  | : Wear protective gloves, protective clothing and eye or face protection. Avoid release to the environment.  |
| Response  | : Collect spillage. IF INHALED: Immediately call a POISON CENTER or doctor. IF SWALLOWED: Immediately call a POISON CENTER or doctor.  |
| Storage   | : Not applicable.  |
| Disposal  | <ul> <li>poispose of contents and container in accordance with all local, regional, national and international regulations.</li> <li>poisson poisson</li> <li>poisson poisson</li> </ul>   |
| Hazardous ingredients   | <ul> <li>bicyclo[2.2.1]heptanebis(methylamine)<br/>benzyl alcohol<br/>salicylic acid<br/>N-(3-(trimethoxysilyl)propyl)ethylenediamine</li> </ul>   |
| Supplemental label elements   | : Not applicable.  |
| Annex XVII - Restrictions<br>on the manufacture,<br>placing on the market and<br>use of certain dangerous<br>substances, mixtures and<br>articles | : Not applicable.  |
| Special packaging requirem  | ients  |
| Containers to be fitted<br>with child-resistant<br>fastenings   | : Not applicable.  |
| Tactile warning of danger   | : Not applicable.  |
| 2.3 Other hazards   |  |
| Product meets the criteria for PBT or vPvB  | : 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   | : Causes digestive tract burns.  |

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

| 3.2 Mixtures  | : Mixture   |                |   |   |         |
|---|---|----------------|---|---|---------|
| Product/ingredient name   | Identifiers   | % by<br>weight | Classification  | Specific Conc.<br>Limits, M-factors<br>and ATEs                                 | Туре    |
| orcyclo[2.2.1]heptanebis<br>(methylamine)                                       | EC: 260-280-7<br>CAS: 56602-77-8  | ≥50 - ≤75      | Acute Tox. 4, H302<br>Skin Corr. 1B, H314<br>Eye Dam. 1, H318                           | ATE [Oral] = 500 mg/<br>kg  | [1]     |
| benzyl alcohol  | REACH #:<br>01-2119492630-38<br>EC: 202-859-9<br>CAS: 100-51-6<br>Index: 603-057-00-5 | ≥25 - ≤50      | Acute Tox. 4, H302<br>Acute Tox. 4, H332<br>Eye Irrit. 2, H319                          | ATE [Oral] = 1230 mg/<br>kg<br>ATE [Inhalation (dusts<br>and mists)] = 1.5 mg/l | [1] [2] |
| Formaldehyde, polymer<br>with N,N-dimethyl-<br>1,3-propanediamine and<br>phenol | CAS: 445498-00-0  | ≥1.0 - ≤5.0    | Acute Tox. 4, H302<br>Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410                  | ATE [Oral] = 500 mg/<br>kg<br>M [Acute] = 1<br>M [Chronic] = 1                  | [1]     |
| salicylic acid  | REACH #:<br>01-2119486984-17<br>EC: 200-712-3<br>CAS: 69-72-7<br>Index: 607-732-00-5  | ≥1.0 - ≤5.0    | Acute Tox. 4, H302<br>Eye Dam. 1, H318<br>Repr. 2, H361d                                | ATE [Oral] = 891 mg/<br>kg  | [1]     |
| N-(3-(trimethoxysilyl)propyl)<br>ethylenediamine                                | EC: 217-164-6<br>CAS: 1760-24-3   | ≥1.0 - ≤5.0    | Acute Tox. 4, H332<br>Eye Dam. 1, H318<br>Skin Sens. 1, H317<br>Aquatic Chronic 3, H412 | ATE [Inhalation<br>(vapours)] = 11 mg/l   | [1]     |
| 2,4,6-tris<br>(dimethylaminomethyl)<br>phenol                                   | REACH #:<br>01-2119560597-27<br>EC: 202-013-9<br>CAS: 90-72-2<br>Index: 603-069-00-0  | ≥1.0 - ≤3.5    | Acute Tox. 4, H302<br>Acute Tox. 4, H312<br>Skin Corr. 1C, H314<br>Eye Dam. 1, H318     | ATE [Oral] = 1200 mg/<br>kg<br>ATE [Dermal] = 1280<br>mg/kg                     | [1]     |
|   |   |                | See Section 16 for<br>the full text of the H<br>statements declared<br>above.           |   |         |

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

<u>Type</u>

Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

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

SUB codes represent substances without registered CAS Numbers.

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# **SECTION 4: First aid measures**

## 4.1 Description of first aid measures

| Eye contact                | : 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.   |
|----------------------------|---|
| Inhalation                 | <ul> <li>Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is<br/>irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained<br/>personnel.</li> </ul>  |
| Skin contact               | <ul> <li>Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water<br/>or use recognised skin cleanser. Do NOT use solvents or thinners.</li> </ul>  |
| Ingestion                  | : If swallowed, seek medical advice immediately and show the container or label. Keep person warm and at rest. Do NOT induce vomiting.  |
| Protection of first-aiders | : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. |

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

| Potential acute health e      | ffects   |
|-------------------------------|--|
| Eye contact                   | : Causes serious eye damage.   |
| Inhalation                    | : Harmful if inhaled.  |
| Skin contact                  | : Causes severe burns. May cause an allergic skin reaction.  |
| Ingestion                     | : Harmful if swallowed. Corrosive to the digestive tract. Causes burns.  |
| <u>Over-exposure signs/sy</u> | v <u>mptoms</u>  |
| Eye contact                   | : Adverse symptoms may include the following:<br>pain<br>watering<br>redness   |
| Inhalation                    | : Adverse symptoms may include the following:<br>reduced foetal weight<br>increase in foetal deaths<br>skeletal malformations  |
| Skin contact                  | : Adverse symptoms may include the following:<br>pain or irritation<br>redness<br>blistering may occur<br>reduced foetal weight<br>increase in foetal deaths<br>skeletal malformations |
| Ingestion                     | : Adverse symptoms may include the following:<br>stomach pains<br>reduced foetal weight<br>increase in foetal deaths<br>skeletal malformations   |
| 4.3 Indication of any imm     | ediate medical attention and special treatment needed  |
| Notes to physician            | : In case of inhalation of decomposition products in a fire, symptoms may be delayed.<br>The exposed person may need to be kept under medical surveillance for 48 hours.               |
| Specific treatments           | : No specific treatment.   |

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|--|---|
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| SECTION 5: Firefigh  | ting measures   |
| 5.1 Extinguishing media<br>Suitable extinguishing<br>media | : Use an extinguishing agent suitable for the surrounding fire.   |
| Unsuitable extinguishing media                             | : None known.   |
| 5.2 Special hazards arising f                              | rom the substance or mixture  |
| Hazards from the substance or mixture                      | : In a fire or if heated, a pressure increase will occur and the container may burst. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.   |
| Hazardous combustion products                              | : Decomposition products may include the following materials:<br>carbon oxides<br>nitrogen oxides<br>metal oxide/oxides<br>Formaldehyde.  |
| 5.3 Advice for firefighters                                |   |
| Special precautions for fire-fighters                      | <ul> <li>Promptly isolate the scene by removing all persons from the vicinity of the incident if<br/>there is a fire. No action shall be taken involving any personal risk or without suitable<br/>training.</li> </ul>   |
| 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, pro  | tective equipment and emergency procedures   |
|--------------------------------|--|
| For non-emergency<br>personnel | : No action shall be taken involving any personal risk or without suitable training.<br>Evacuate surrounding areas. Keep unnecessary and unprotected personnel from<br>entering. Do not touch or walk through spilt material. Do not breathe vapour or mist.<br>Provide adequate ventilation. Wear appropriate respirator when ventilation is<br>inadequate. Put on appropriate personal protective equipment. |
| For emergency responders       | : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".  |
| 6.2 Environmental precautions  | : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.   |
| 6.3 Methods and material for   | containment and cleaning up  |
| Small spill                    | : Stop leak if without risk. Move containers from spill area. 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.  |

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| <b>SECTION 6: Accid</b>                  | ental release measures  |
| Large spill                              | : Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spill product. |
| 6.4 Reference to other sections          | : See Section 1 for emergency contact information.<br>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

| Protective measures  | : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. 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<br>storage, including any<br>incompatibilities | : Store between the following temperatures: 0 to 35°C (32 to 95°F). Store in accordance with local regulations. 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. 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 unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.  |

## 7.3 Specific end use(s)

See Section 1.2 for Identified uses.

# **SECTION 8: Exposure controls/personal protection**

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).

#### 8.1 Control parameters

## **Occupational exposure limits**

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# **SECTION 8: Exposure controls/personal protection**

| Product/ingredient name   | Exposure limit values                   |  |  |  |
|---|---|--|--|--|
| benzyl alcohol  | IPEL (-).<br>TWA: 5 ppm<br>STEL: 10 ppm |  |  |  |
| <b>Recommended monitoring</b> : If this product contains ingredients with exposure limits, personal, workplace<br>atmosphere or biological monitoring may be required to determine the effectiveness of |   |  |  |  |

procedures 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** 

| Product/ingredient name      | Туре  | Exposure              | Value                   | Population         | Effect    |
|------------------------------|-------|-----------------------|-------------------------|--------------------|-----------|
| ncyclo[2.2.1]heptanebis      | DNEL  | Long term Oral        | 0.03 mg/kg bw/day       | General population | Systemic  |
| methylamine)                 |       |                       |                         |                    |           |
|                              | DNEL  | Long term Dermal      | 0.03 mg/kg bw/day       | General population |           |
|                              | DNEL  | Long term Dermal      | 0.05 mg/kg bw/day       | Workers            | Systemic  |
|                              | DNEL  | Long term Inhalation  | 0.09 mg/m <sup>3</sup>  | General population | Systemic  |
|                              | DNEL  | Short term Oral       | 0.15 mg/kg bw/day       | General population | Systemic  |
|                              | DNEL  | Short term Dermal     | 0.15 mg/kg bw/day       | General population | Systemic  |
|                              | DNEL  | Short term Dermal     | 0.3 mg/kg bw/day        | Workers            | Systemic  |
|                              | DNEL  | Long term Inhalation  | 0.4 mg/m <sup>3</sup>   | Workers            | Systemic  |
|                              | DNEL  | Short term Inhalation | 0.52 mg/m <sup>3</sup>  | General population | Systemic  |
|                              | DNEL  | Short term Inhalation | 2.112 mg/m <sup>3</sup> | Workers            | Systemic  |
| enzyl alcohol                | DNEL  | Long term Oral        | 4 mg/kg bw/day          | General population |           |
| ,                            | DNEL  | Long term Dermal      | 4 mg/kg bw/day          | General population |           |
|                              | DNEL  | Long term Inhalation  | 5.4 mg/m <sup>3</sup>   | General population |           |
|                              | DNEL  | Long term Dermal      | 8 mg/kg bw/day          | Workers            | Systemic  |
|                              | DNEL  | Short term Oral       | 20 mg/kg bw/day         | General population |           |
|                              | DNEL  | Short term Dermal     | 20 mg/kg bw/day         | General population | Systemic  |
|                              | DNEL  | Long term Inhalation  | 22 mg/m <sup>3</sup>    | Workers            | Systemic  |
|                              | DNEL  | Short term Inhalation | 27 mg/m <sup>3</sup>    | General population |           |
|                              | DNEL  | Short term Dermal     | 40 mg/kg bw/day         | Workers            | Systemic  |
|                              | DNEL  | Short term Inhalation | 110 mg/m <sup>3</sup>   | Workers            | Systemic  |
| alicylic acid                | DNEL  | Long term Oral        | 1 mg/kg bw/day          | General population |           |
|                              | DNEL  | Long term Dermal      | 1 mg/kg bw/day          | General population |           |
|                              | DNEL  | Long term Dermal      | 2.3 mg/kg bw/day        | Workers            | Systemic  |
|                              | DNEL  | Short term Oral       | 4 mg/kg bw/day          | General population |           |
|                              | DNEL  | Long term Inhalation  | 4 mg/m <sup>3</sup>     | General population | Systemic  |
|                              | DNEL  | Long term Inhalation  | 5 mg/m <sup>3</sup>     | Workers            | Local     |
|                              | DNEL  | Long term Inhalation  | 5 mg/m <sup>3</sup>     | Workers            | Systemic  |
| -(3-(trimethoxysilyl)propyl) | DNEL  | Long term Oral        | 2.5 mg/kg bw/day        | General population |           |
| thylenediamine               | DINEL | Long term Oral        | 2.5 mg/kg bw/day        |                    | Oysternic |
| Inglehediamine               | DNEL  | Long term Dermal      | 2.5 mg/kg bw/day        | General population | Systemic  |
|                              | DNEL  | Short term Dermal     | 5 mg/kg bw/day          | Workers            | Systemic  |
|                              | DNEL  | Long term Dermal      | 5 mg/kg bw/day          | Workers            | Systemic  |
|                              | DNEL  | Long term Inhalation  | 8.7 mg/m <sup>3</sup>   |                    |           |
|                              |       |                       | 0                       | General population | Systemic  |
|                              | DNEL  | Short term Dermal     | 17 mg/kg bw/day         | General population |           |
|                              | DNEL  | Long term Inhalation  | $35.3 \text{ mg/m}^3$   | Workers            | Systemic  |
|                              | DNEL  | Long term Inhalation  | 0.1 mg/m <sup>3</sup>   | General population | Local     |
| English (GB)                 | •     | •                     | Europe                  | •                  | 7/16      |

Short term Inhalation

Long term Inhalation

Long term Inhalation

Short term Inhalation

Long term Dermal

Short term Dermal

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|--|----------|-----------------------|------------------------|--------------------|----------|
| SECTION 8: Expos   | ure cont | rols/personal pr      | otection               |                    |          |
|  | DNEL     | Long term Inhalation  | 0.6 mg/m <sup>3</sup>  | Workers            | Local    |
|  | DNEL     | Short term Inhalation | 4 mg/m <sup>3</sup>    | General population | Local    |
|  | DNEL     | Short term Inhalation | 5.36 mg/m <sup>3</sup> | Workers            | Local    |
|  | DNEL     | Short term Inhalation | 50 mg/m <sup>3</sup>   | General population | Systemic |
|  | DNEL     | Short term Inhalation | 260 mg/m <sup>3</sup>  | Workers            | Systemic |
| 2,4,6-tris   | DNEL     | Long term Oral        | 0.075 mg/kg bw/day     | General population | Systemic |
| (dimethylaminomethyl)phe   | enol     | J J                   |                        |                    | -        |
|  | DNEL     | Short term Dermal     | 0.075 mg/kg bw/day     | General population | Systemic |
|  | DNEL     | Long term Dermal      | 0.075 mg/kg bw/day     | General population |          |
|  |          | - · · · · · ·         |                        |                    | -        |

0.13 mg/m<sup>3</sup>

0.13 mg/m<sup>3</sup>

0.53 mg/m<sup>3</sup>

2.1 mg/m<sup>3</sup>

0.15 mg/kg bw/day

0.6 mg/kg bw/day

General population

General population

Workers

Workers

Workers

Workers

Systemic

Systemic

Systemic

Systemic

Systemic

Systemic

| 8.2 | <b>Exposure</b> | controls |  |
|-----|-----------------|----------|--|

PNECs - Not available.

**PNECs** 

DNEL

DNEL

DNEL

DNEL

DNEL

DNEL

| 0.2 Exposure controls               |   |
|-------------------------------------|---|
| Appropriate engineering<br>controls | : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation<br>or other engineering controls to keep worker exposure to airborne contaminants below<br>any recommended or statutory limits.   |
| Individual protection meas          | <u>ures</u>   |
| Hygiene measures                    | : Wash hands, forearms and face thoroughly after handling chemical products, before<br>eating, smoking and using the lavatory and at the end of the working period.<br>Appropriate techniques should be used to remove potentially contaminated clothing.<br>Contaminated work clothing should not be allowed out of the workplace. Wash<br>contaminated clothing before reusing. Ensure that eyewash stations and safety<br>showers are close to the workstation location.   |
| Eye/face protection                 | : Chemical splash goggles and face shield. Use eye protection according to EN 166.  |
| 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 greater than 480 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 2 or higher (breakthrough time greater than 30 minutes according to EN 374) is recommended. 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. |
| Gloves                              | : butyl rubber  |
| Body protection                     | <ul> <li>Personal protective equipment for the body should be selected based on the task<br/>being performed and the risks involved and should be approved by a specialist before<br/>handling this product.</li> </ul>   |
| Other skin protection               | <ul> <li>Appropriate footwear and any additional skin protection measures should be selected<br/>based on the task being performed and the risks involved and should be approved by<br/>a specialist before handling this product.</li> </ul>   |

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| <b>SECTION 8: Exposure</b>                 | e controls/personal protection   |
| Respiratory protection                     | : 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. If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Wear a respirator conforming to EN140. Filter type: organic vapour (Type A) and particulate filter P3 |
| 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**

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

# 9.1 Information on basic physical and chemical properties

| <u>Appearance</u>                            |      |  |
|--|------|--|
| Physical state                               | : Li | quid.  |
| Colour                                       | : V  | arious   |
| Odour  | : A  | mine-like. [Strong]  |
| Odour threshold                              | : N  | ot available.  |
| Melting point/freezing point                 |      | lay start to solidify at the following temperature: -15.4°C (4.3°F) This is based on<br>ata for the following ingredient: benzyl alcohol. Weighted average: -15.71°C (3.7°F) |
| Initial boiling point and<br>boiling range   | : >: | 37.78°C  |
| Flammability                                 | : N  | ot available.  |
| Upper/lower flammability or explosive limits |      | reatest known range: Lower: 18.3% Upper: 46.6% (bicyclo[2.2.1]heptanebis nethylamine))   |
| Flash point                                  | : C  | losed cup: 118°C   |
| Auto-ignition temperature                    | : 43 | 30°C (806°F)   |
| Decomposition temperature                    | : S  | table under recommended storage and handling conditions (see Section 7).   |
| рН   | : N  | ot applicable. insoluble in water.   |
| Viscosity                                    | : K  | inematic (40°C): >21 mm²/s   |
| Solubility(ies)                              | :    |  |
| Media  |      | Result   |
| cold water                                   |      | Not soluble  |

Partition coefficient: n-octanol/ : Not applicable. water

2

## Vapour pressure

|                      |   | Vapou                                      | Vapour Pressure at 20°C |                  | Vapour pressure at |     | sure at 50°C |
|----------------------|---|--|-------------------------|------------------|--------------------|-----|--------------|
|                      | Ingredient name                                   | Ingredient name mm Hg kPa                  |                         | Method           | mm<br>Hg           | kPa | Method       |
|                      | <b>b</b> icyclo[2.2.1]heptanebis<br>(methylamine) | 6.97557195                                 | 5 0.93                  |                  |                    |     |              |
| Evaporation rate     | : 0.007 (benzyl alcoho                            | enzyl alcohol) compared with butyl acetate |                         |                  |                    | •   |              |
| Relative density     | : 1.03  |  |                         |                  |                    |     |              |
| Vapour density       | : Highest known value                             | e: 3.7 (Air                                | -=1) (k                 | oenzyl alcohol). |                    |     |              |
| Explosive properties | : · · · · · · · · · · · · · · · · · · ·           |  |                         |                  |                    |     |              |
| English (GB)         |   |  | Europe                  |                  |                    |     | 9/16         |

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| <b>SECTION 9: Physical</b>                 | and chemical properties   |
|  | The product itself is not explosive, but the formation of an explosible mixture of vapour or dust with air is possible. |
| Oxidising properties                       | : Product does not present an oxidizing hazard.   |
| Particle characteristics                   |   |
| Median particle size                       | : Not applicable.   |
| 9.2 Other information                      |   |
| No additional information.                 |   |

| 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                 | : When exposed to high temperatures may produce hazardous decomposition products.<br>Refer to protective measures listed in sections 7 and 8.         |
| 10.5 Incompatible materials              | : Keep away from the following materials to prevent strong exothermic reactions: oxidising agents, strong alkalis, strong acids.                      |
| 10.6 Hazardous<br>decomposition products | : Depending on conditions, decomposition products may include the following materials: carbon oxides nitrogen oxides Formaldehyde. metal oxide/oxides |

# **SECTION 11: Toxicological information**

## 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

## Acute toxicity

| Product/ingredient name                          | Result                          | Species | Dose                  | Exposure |  |
|--|---------------------------------|---------|-----------------------|----------|--|
| prcyclo[2.2.1]heptanebis(methylamine)            | LD50 Oral                       | Rat     | 961 to 1400 mg/<br>kg | -        |  |
| benzyl alcohol                                   | LC50 Inhalation Dusts and mists | Rat     | >4178 mg/m³           | 4 hours  |  |
|  | LD50 Dermal                     | Rabbit  | 2000 mg/kg            | -        |  |
|  | LD50 Oral                       | Rat     | 1.23 g/kg             | -        |  |
| salicylic acid                                   | LD50 Oral                       | Rat     | 0.891 g/kg            | -        |  |
| N-(3-(trimethoxysilyl)propyl)<br>ethylenediamine | LD50 Oral                       | Rat     | 2413 mg/kg            | -        |  |
| 2,4,6-tris(dimethylaminomethyl)phenol            | LD50 Dermal                     | Rabbit  | 1.28 g/kg             | -        |  |
|  | LD50 Dermal                     | Rat     | 1280 mg/kg            | -        |  |
|  | LD50 Oral                       | Rat     | 1200 mg/kg            | -        |  |

**Conclusion/Summary** : There are no data available on the mixture itself.

# Irritation/Corrosion

| Product/ingredient name               | Result                  | Species | Score | Exposure | Observation |
|---------------------------------------|-------------------------|---------|-------|----------|-------------|
| ₽,4,6-tris(dimethylaminomethyl)phenol | Skin - Visible necrosis | Rabbit  | -     | 4 hours  | 7 days      |

## **Conclusion/Summary**

Skin

: There are no data available on the mixture itself.

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|--|--|
| ECTION 11: Toxic   | ological information   |
| Eyes   | : There are no data available on the mixture itself.   |
| Respiratory  | : There are no data available on the mixture itself.   |
| <u>Sensitisation</u>   |  |
| Conclusion/Summary   |  |
| Skin   | : There are no data available on the mixture itself.   |
| Respiratory  | : There are no data available on the mixture itself.   |
| <u>Autagenicity</u>  |  |
| Conclusion/Summary   | : There are no data available on the mixture itself.   |
| Carcinogenicity  | . There are no data quailable on the mixture itself  |
| Conclusion/Summary<br>Reproductive toxicity  | : There are no data available on the mixture itself.   |
| Conclusion/Summary   | : There are no data available on the mixture itself.   |
| -  |  |
| <u>eratogenicity</u><br>Conclusion/Summary   | : There are no data available on the mixture itself.   |
| Specific target organ toxi   |  |
| Not available.   | <u>(Single exposure)</u>   |
|  |  |
| Not available.   | icity (repeated exposure)  |
| Aspiration hazard<br>Not available.  |  |
| Aspiration hazard<br>lot available.<br>nformation on likely<br>outes of exposure   | : Not available.   |
| lot available.<br>nformation on likely   |  |
| lot available.<br>nformation on likely<br>outes of exposure  |  |
| lot available.<br>nformation on likely<br>outes of exposure<br>Potential acute health effe   | <u>ects</u>  |
| lot available.<br>nformation on likely<br>outes of exposure<br>Potential acute health effe<br>Inhalation   | ects<br>: Harmful if inhaled.  |
| lot available.<br>nformation on likely<br>outes of exposure<br>Potential acute health effe<br>Inhalation<br>Ingestion<br>Skin contact<br>Eye contact                                   | <ul> <li>ects</li> <li>Harmful if inhaled.</li> <li>Harmful if swallowed. Corrosive to the digestive tract. Causes burns.</li> <li>Causes severe burns. May cause an allergic skin reaction.</li> <li>Causes serious eye damage.</li> </ul>  |
| lot available.<br>nformation on likely<br>outes of exposure<br><u>Potential acute health effe</u><br>Inhalation<br>Ingestion<br>Skin contact<br>Eye contact<br>Symptoms related to the | ects <ul> <li>Harmful if inhaled.</li> <li>Harmful if swallowed. Corrosive to the digestive tract. Causes burns.</li> <li>Causes severe burns. May cause an allergic skin reaction.</li> <li>Causes serious eye damage.</li> </ul> physical, chemical and toxicological characteristics  |
| lot available.<br>nformation on likely<br>outes of exposure<br>Potential acute health effe<br>Inhalation<br>Ingestion<br>Skin contact<br>Eye contact                                   | <ul> <li>ects</li> <li>Harmful if inhaled.</li> <li>Harmful if swallowed. Corrosive to the digestive tract. Causes burns.</li> <li>Causes severe burns. May cause an allergic skin reaction.</li> <li>Causes serious eye damage.</li> </ul>  |
| lot available.<br>nformation on likely<br>outes of exposure<br><u>Potential acute health effe</u><br>Inhalation<br>Ingestion<br>Skin contact<br>Eye contact<br>Symptoms related to the | <ul> <li>ects <ul> <li>Harmful if inhaled.</li> <li>Harmful if swallowed. Corrosive to the digestive tract. Causes burns.</li> <li>Causes severe burns. May cause an allergic skin reaction.</li> <li>Causes serious eye damage.</li> </ul> </li> <li>physical, chemical and toxicological characteristics <ul> <li>Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths</li> </ul> </li> </ul> |

English (GB)

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|---|--|-------------------|
| SECTION 11: Toxicol                                   | ogical information   |                   |
| Eye contact   | : Adverse symptoms may include the following:<br>pain<br>watering<br>redness |                   |
| Delayed and immediate effe                            | ts as well as chronic effects from short and long-term ex                    | <u>posure</u>     |
| Short term exposure<br>Potential immediate<br>effects | : Not available.   |                   |
| Potential delayed effects                             | : Not available.   |                   |
| Long term exposure<br>Potential immediate<br>effects  | : Not available.   |                   |
| Potential delayed effects                             | : Not available.   |                   |
| Potential chronic health effe<br>Not available.       | <u>cts</u>   |                   |
| Conclusion/Summary                                    | : Not available.   |                   |

| General               | : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels. |
|-----------------------|---|
| Carcinogenicity       | : No known significant effects or critical hazards.   |
| Mutagenicity          | : No known significant effects or critical hazards.   |
| Reproductive toxicity | : Suspected of damaging the unborn child.   |
| Other information     | : Not available.  |
|                       |   |

Causes digestive tract burns. Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Inhalation of vapour/aerosol concentrations above the recommended exposure limits causes headaches, drowsiness and nausea and may lead to unconsciousness or death. Trimethoxysilanes are capable of forming methanol if hydrolyzed or ingested. If swallowed, methanol may be harmful or fatal or cause blindness. Contains a substance that may emit formaldehyde if stored beyond its shelf life and/or during cure at curing temperatures greater than 60C/140F.

## **11.2 Information on other hazards**

**11.2.1 Endocrine disrupting properties** 

Not available.

#### 11.2.2 Other information

Not available.

# **SECTION 12: Ecological information**

## 12.1 Toxicity

| Product/ingredient name               | Result                                 | Species                                   | Exposure |
|---------------------------------------|--|---|----------|
| salicylic acid                        | Acute EC50 1147.57 mg/l<br>Fresh water | Daphnia - Daphnia<br>Iongispina - Neonate | 48 hours |
|                                       | Chronic NOEC 5.6 mg/l<br>Fresh water   | Daphnia - Daphnia<br>magna - Neonate      | 21 days  |
| 2,4,6-tris(dimethylaminomethyl)phenol | Acute LC50 175 mg/l                    | Fish                                      | 96 hours |

**Conclusion/Summary** : There are no data available on the mixture itself.

## 12.2 Persistence and degradability

**Conclusion/Summary** : There are no data available on the mixture itself.

| $\mathbf{E}$ |  |
|--------------|--|
| English (GB) |  |

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# SECTION 12: Ecological information

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|-------------------------|-------------------|------------|------------------|
| benzyl alcohol          | -                 | -          | Readily          |

## 12.3 Bioaccumulative potential

| Product/ingredient name               | LogPow       | BCF | Potential |
|---------------------------------------|--------------|-----|-----------|
| enzyl alcohol                         | 0.87         |     | low       |
| salicylic acid                        | 2.21 to 2.26 |     | low       |
| 2,4,6-tris(dimethylaminomethyl)phenol | 0.219        |     | low       |

| 12.4 Mobility in soil                                  |                  |
|--|------------------|
| Soil/water partition<br>coefficient (K <sub>oc</sub> ) | : Not available. |
| Mobility   | : Not available. |

#### 12.5 Results of PBT and vPvB assessment

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

#### 12.6 Endocrine disrupting properties

Not available.

#### 12.7 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

| 08 01 11*                    | waste paint and varnish containing organic solvents or other hazardous substances   |
|------------------------------|---|
| Waste code                   | Waste designation   |
| <u>European waste catalo</u> | gue (EWC)   |
| Hazardous waste              | : Yes.  |
| 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 t the sewer unless fully compliant with the requirements of all authorities with jurisdiction |

#### 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.

| Type of packaging |          | European waste catalogue (EWC) |
|-------------------|----------|--------------------------------|
| Container         | 15 01 06 | mixed packaging                |
|                   |          |                                |

| English | (GB) |
|---------|------|
|---------|------|

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# **SECTION 13: Disposal considerations**

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. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

# 14. Transport information

|                                    | ADR/RID         | ADN             | IMDG  | ΙΑΤΑ  |
|------------------------------------|-----------------|-----------------|---|---|
| 14.1 UN number<br>or ID number     | UN3066          | UN3066          | UN3066  | UN3066  |
| 14.2 UN proper shipping name       | PAINT           | PAINT           | PAINT   | PAINT   |
| 14.3 Transport<br>hazard class(es) | 8               | 8               | 8   | 8   |
| 14.4 Packing<br>group              | II              | II              | II  | II  |
| 14.5<br>Environmental<br>hazards   | Yes.            | Yes.            | Yes.  | Yes. The<br>environmentally<br>hazardous substance<br>mark is not required. |
| Marine pollutant<br>substances     | Not applicable. | Not applicable. | (Formaldehyde,<br>polymer with N,N-<br>dimethyl-<br>1,3-propanediamine<br>and phenol) | Not applicable.   |

## Additional information

| ADR/RID  | The environmentally hazardous substance mark is not required when transported in sizes of $\leq$ 5 L or $\leq$ 5 kg.  |  |
|--|---|--|
| Tunnel code  | : (E)   |  |
| ADN  | The environmentally hazardous substance mark is not required when transported in sizes of $\leq 5 \text{ L}$ or $\leq 5 \text{ kg}$ .   |  |
| IMDG   | The marine pollutant mark is not required when transported in sizes of $\leq 5$ L or $\leq 5$ kg.   |  |
| ΙΑΤΑ   | : The environmentally hazardous substance mark may appear if required by other transportation regulations.  |  |
| 14.6 Special prec<br>user                              | autions for : <b>Transport within user's premises:</b> 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 Maritime tran<br>bulk according to<br>instruments |   |  |

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|      |            |                                |                   |

# **SECTION 15: Regulatory information**

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture <u>EU Regulation (EC) No. 1907/2006 (REACH)</u>

Annex XIV - List of substances subject to authorisation

#### Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions : Not applicable.

on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

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

Not listed.

#### Seveso Directive

This product is controlled under the Seveso Directive.

| Danger criteria |
|-----------------|
| Category        |
| E2              |

**15.2 Chemical safety** 

: No Chemical Safety Assessment has been carried out.

#### assessment

**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] DNEL = Derived No Effect Level EUH statement = CLP-specific Hazard statement PNEC = Predicted No Effect Concentration RRN = REACH Registration Number PBT = Persistent, Bioaccumulative and Toxic vPvB = Very Persistent and Very Bioaccumulative ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway IMDG = International Maritime Dangerous Goods

IATA = International Air Transport Association

Full text of abbreviated H statements

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|--|---|--|
| SECTION 16: Other information              |   |  |
| H302                                       | Harmful if swallowed.                                 |  |
| H312                                       | Harmful in contact with skin.                         |  |
| H314                                       | Causes severe skin burns and eye damage.              |  |
| H317                                       | May cause an allergic skin reaction.                  |  |
| H318                                       | Causes serious eye damage.                            |  |
| H319                                       | Causes serious eye irritation.                        |  |
| H332                                       | Harmful if inhaled.                                   |  |
| H361d                                      | Suspected of damaging the unborn child.               |  |
| H400                                       | Very toxic to aquatic life.                           |  |
| H410                                       | Very toxic to aquatic life with long lasting effects. |  |
| H411                                       | Toxic to aquatic life with long lasting effects.      |  |
| H412                                       | Harmful to aquatic life with long lasting effects.    |  |
| Full text of classifications [CLP/GHS]     |   |  |
| Acute Tox. 4                               | ACUTE TOXICITY - Category 4                           |  |
| Aquatic Acute 1                            | SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1        |  |
| Aquatic Chronic 1                          | LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1       |  |
| Aquatic Chronic 2                          | LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2       |  |
| Aquatic Chronic 3                          | LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3       |  |
| Eye Dam. 1                                 | SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1        |  |
| Eye Irrit. 2                               | SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2        |  |
| Repr. 2                                    | REPRODUCTIVE TOXICITY - Category 2                    |  |
| Skin Corr. 1B                              | SKIN CORROSION/IRRITATION - Category 1B               |  |
| Skin Corr. 1C                              | SKIN CORROSION/IRRITATION - Category 1C               |  |
| Skin Sens. 1                               | SKIN SENSITISATION - Category 1                       |  |

| <u>Instory</u>                  |                   |
|---------------------------------|-------------------|
| Date of issue/ Date of revision | : 2 November 2022 |
| Date of previous issue          | : 29 June 2021    |
| Prepared by                     | : EHS             |
| Version                         | : 13.02           |

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