# **SAFETY DATA SHEET**

Date of issue/Date of revision

: 9 October 2024

Version : 2.07

pPG

Ireland

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

**1.1 Product identifier** 

Product name

: PHENGUARD 610/780/985 HARDENER

Product code

: 000001189495

Other means of identification

00446961; 00463557; 00478397

| 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 | : <mark>F</mark> ardener.; 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 : Product.Stewardship.EMEA@ppg.com

responsible for this SDS

#### 1.4 Emergency telephone number

#### National advisory body/Poison Centre

National Poison Information Centre at Beaumont Hospital. Tel: +353 1 8092566, email: npicdublin@beaumont.ie <u>Supplier</u>

+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] Flam. Liq. 3, H226 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 STOT SE 3, H335 Aquatic Chronic 3, H412 The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

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# **SECTION 2: Hazards identification**

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

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

#### 2.2 Label elements

Hazard pictograms



| Signal word<br>Hazard statements  | <ul> <li>Danger</li> <li>Flammable liquid and vapour.<br/>Causes severe skin burns and eye damage.<br/>May cause an allergic skin reaction.<br/>May cause respiratory irritation.<br/>Harmful to aquatic life with long lasting effects.</li> </ul> |
|---|---|
| Precautionary statements  |   |
| Prevention  | : Wear protective gloves, protective clothing and eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  |
| Response  | : IF INHALED: Immediately call a POISON CENTER or doctor. IF SWALLOWED:<br>Immediately call a POISON CENTER or doctor.  |
| Storage   | : Store in a well-ventilated place. Keep container tightly closed.  |
| Disposal  | : Dispose of contents and container in accordance with all local, regional, national and international regulations.   |
|   | P280, P210, P304 + P310, P301 + P310, P403 + P233, P501   |
| 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 requiren  | nents   |
| 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   | : Prolonged or repeated contact may dry skin and cause irritation.  |

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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    |
| ₩ylene   | REACH #:<br>01-2119488216-32<br>EC: 215-535-7<br>CAS: 1330-20-7                       | ≥10 - ≤25      | 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>Asp. Tox. 1, H304<br>Aquatic Chronic 3, H412 | ATE [Dermal] = 1700<br>mg/kg<br>ATE [Inhalation<br>(vapours)] = 11 mg/l | [1] [2] |
| 3-aminopropyldiethylamine                        | REACH #:<br>01-2119965402-39<br>EC: 203-236-4<br>CAS: 104-78-9<br>Index: 612-062-00-1 | ≥10 - ≤18      | Flam. Liq. 3, H226<br>Acute Tox. 4, H302<br>Acute Tox. 3, H311<br>Skin Corr. 1B, H314<br>Eye Dam. 1, H318<br>Skin Sens. 1, H317  | ATE [Oral] = 830 mg/<br>kg<br>ATE [Dermal] = 524<br>mg/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 | ≥10 - ≤16      | Acute Tox. 4, H302<br>Eye Irrit. 2, H319<br>Skin Sens. 1B, H317  | ATE [Oral] = 1200 mg/<br>kg   | [1]     |
| 2-methylpropan-1-ol                              | REACH #:<br>01-2119484609-23<br>EC: 201-148-0<br>CAS: 78-83-1<br>Index: 603-108-00-1  | ≥5.0 - ≤10     | Flam. Liq. 3, H226<br>Skin Irrit. 2, H315<br>Eye Dam. 1, H318<br>STOT SE 3, H335<br>STOT SE 3, H336  | -   | [1] [2] |
| m-phenylenebis<br>(methylamine)                  | REACH #:<br>01-2119480150-50<br>EC: 216-032-5<br>CAS: 1477-55-0                       | ≥5.0 - ≤8.8    | Acute Tox. 4, H302<br>Acute Tox. 4, H332<br>Skin Corr. 1B, H314<br>Eye Dam. 1, H318<br>Skin Sens. 1B, H317<br>Aquatic Chronic 3, H412<br>EUH071                                | ATE [Oral] = 930 mg/<br>kg<br>ATE [Inhalation<br>(gases)] = 4500 ppm    | [1] [2] |
| ethylbenzene                                     | REACH #:<br>01-2119489370-35<br>EC: 202-849-4<br>CAS: 100-41-4<br>Index: 601-023-00-4 | ≥1.0 - ≤5.0    | Flam. Liq. 2, H225<br>Acute Tox. 4, H332<br>STOT RE 2, H373<br>(hearing organs)<br>Asp. Tox. 1, H304<br>Aquatic Chronic 3, H412  | ATE [Inhalation<br>(vapours)] = 17.8 mg/l                               | [1] [2] |
| N-(3-(trimethoxysilyl)propyl)<br>ethylenediamine | EC: 217-164-6<br>CAS: 1760-24-3   | ≥1.0 - ≤5.0    | Eye Dam. 1, H318<br>Skin Sens. 1B, H317<br>STOT SE 3, H335   | -   | [1]     |
| toluene  | REACH #:<br>01-2119471310-51<br>EC: 203-625-9<br>CAS: 108-88-3<br>Index: 601-021-00-3 | ≤0.30          | Flam. Liq. 2, H225<br>Skin Irrit. 2, H315<br>Repr. 2, H361d<br>STOT SE 3, H336<br>STOT RE 2, H373<br>Asp. Tox. 1, H304   | -   | [1] [2] |
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## **SECTION 3: Composition/information on ingredients**

| 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>

[1] 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.

# 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 heal      | th effects  |
|---------------------------|---|
| Eye contact               | : Causes serious eye damage.  |
| Inhalation                | : May cause respiratory irritation.   |
| Skin contact              | : Causes severe burns. Defatting to the skin. May cause an allergic skin reaction.        |
| Ingestion                 | : No known significant effects or critical hazards.                                       |
| <u>Over-exposure sign</u> | s/symptoms  |
| Eye contact               | : Adverse symptoms may include the following:<br>pain<br>watering<br>redness              |
| Inhalation                | : Adverse symptoms may include the following:<br>respiratory tract irritation<br>coughing |

| Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Commission Regulation (El | U) |
|--|----|
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|---|---|
| SECTION 4: First                        | aid measures  |
| Skin contact                            | : Adverse symptoms may include the following:<br>pain or irritation<br>redness<br>dryness<br>cracking<br>blistering may occur   |
| Ingestion                               | : Adverse symptoms may include the following: stomach pains   |
| 4.3 Indication of any imm               | nediate medical attention and special treatment needed  |
| Notes to physician                      | <ul> <li>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.</li> </ul> |
| Specific treatments                     | : No specific treatment.  |

| 5.1 Extinguishing media<br>Suitable extinguishing<br>media | : Use dry chemical, CO <sub>2</sub> , water spray (fog) or foam.   |
|--|--|
| Unsuitable extinguishing media                             | : Do not use water jet.  |
| 5.2 Special hazards arising f                              | rom the substance or mixture   |
| Hazards from the substance or mixture                      | : Flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain. |
| Hazardous combustion products                              | <ul> <li>Decomposition products may include the following materials:<br/>carbon oxides<br/>nitrogen oxides<br/>metal oxide/oxides<br/>Formaldehyde.</li> </ul>   |
| 5.3 Advice for firefighters                                |  |
| Special precautions for fire-fighters                      | : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.   |
| Special protective<br>equipment for fire-fighters          | : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.  |
|  |  |

# **SECTION 6: Accidental release measures**

| 6.1 Personal precautions       | , protective equipment and emergency procedures   |
|--------------------------------|---|
| For non-emergency<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. Shut off all ignition sources. No<br>flares, smoking or flames in hazard area. Do not breathe vapour or mist. Provide<br>adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put<br>on appropriate personal protective equipment. |
|                                |   |

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|--------------------------|-----------------------------------|---|---|---|
| SECTION                  | 6: Accident                       | al release i  | measures  |   |
| For emerger              | ncy responders                    |   | l clothing is required to deal with the spi<br>suitable and unsuitable materials. See<br>ersonnel".   |   |
| 6.2 Environm precautions | ental                             | sewers. Info pollution (sev   | sal of spilt material and runoff and conta<br>rm the relevant authorities if the produc<br>vers, waterways, soil or air). Water poll<br>ent if released in large quantities.  | t has caused environmental  |
| 6.3 Methods a            | and material for o                | containment ar  | nd cleaning up  |   |
| Small spill              |                                   | explosion-pro<br>or if water-ins  | vithout risk. Move containers from spill<br>oof equipment. Dilute with water and m<br>soluble, absorb with an inert dry materia<br>tainer. Dispose of via a licensed waste  | op up if water-soluble. Alternatively,<br>I and place in an appropriate waste   |
| Large spill              |                                   | explosion-pro<br>sewers, wate<br>treatment pla<br>combustible,<br>place in cont<br>waste dispos | without risk. Move containers from spill<br>bof equipment. Approach the release fr<br>er courses, basements or confined area<br>ant or proceed as follows. Contain and<br>absorbent material e.g. sand, earth, ve<br>ainer for disposal according to local reg<br>al contractor. Contaminated absorbent<br>e spilt product. | om upwind. Prevent entry into<br>s. Wash spillages into an effluent<br>collect spillage with non-<br>rmiculite or diatomaceous earth and<br>ulations. Dispose of via a licensed |
| 6.4 Reference sections   | e to other                        | See Section   | 1 for emergency contact information.<br>8 for information on appropriate person<br>13 for additional waste treatment inform   |   |

# **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. 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. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container. |
|--|--|
| Advice on general occupational hygiene | : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.  |

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## **SECTION 7: Handling and storage**

| 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 a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidising materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled |
|--|--|
|  | 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**

| Product/ingredient name     | Exposure limit values  |
|-----------------------------|--|
| <b>x</b> ylene              | <ul> <li>NAOSH (Ireland, 5/2021) [xylene] Absorbed through skin.</li> <li>OELV 8 hours: 50 ppm.</li> <li>OELV 8 hours: 221 mg/m<sup>3</sup>.</li> <li>OELV 15 minutes: 100 ppm.</li> <li>OELV 15 minutes: 442 mg/m<sup>3</sup>.</li> </ul> |
| 2-methylpropan-1-ol         | NAOSH (Ireland, 5/2021)<br>OELV 8 hours: 50 ppm.<br>OELV 8 hours: 150 mg/m <sup>3</sup> .<br>OELV 15 minutes: 75 ppm.<br>OELV 15 minutes: 225 mg/m <sup>3</sup> .  |
| m-phenylenebis(methylamine) | NAOSH (Ireland, 5/2021)<br>OELV 8 hours: 0.1 mg/m <sup>3</sup> .   |
| ethylbenzene                | NAOSH (Ireland, 5/2021) Absorbed through skin.<br>OELV 8 hours: 100 ppm.<br>OELV 8 hours: 442 mg/m <sup>3</sup> .<br>OELV 15 minutes: 200 ppm.<br>OELV 15 minutes: 884 mg/m <sup>3</sup> .   |
| toluene                     | <ul> <li>NAOSH (Ireland, 5/2021) Absorbed through skin.</li> <li>OELV 8 hours: 50 ppm.</li> <li>OELV 8 hours: 192 mg/m<sup>3</sup>.</li> <li>OELV 15 minutes: 100 ppm.</li> <li>OELV 15 minutes: 384 mg/m<sup>3</sup>.</li> </ul>          |

**Biological exposure indices** 

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

| Product/ingredient name | Exposure indices   |
|-------------------------|--|
| xylene                  | <b>NAOSH (Ireland, 1/2011) [Xylene]</b><br>BMGV: 1.5 g/g creatinine, methylhippuric acids [in urine]. Sampling<br>time: end of shift - As soon as possible after exposure ceases.  |
| ethylbenzene            | <ul> <li>NAOSH (Ireland, 1/2011)</li> <li>BMGV: Semi-quantitative, the biological analyte is an indicator of exposure to the substance but the quantitative interpretation of the measurement is ambiguous. These analytes should be used as a screening test if a quantitative test is not practical; or as a confirmatory test if the quantitative test is not specific and the origin of the determinant is in question., ethylbenzene [in endexhaled air]. Sampling time: not critical.</li> <li>BMGV: 0.7 g/g creatinine [Semi-quantitative, the biological analyte is an indicator of exposure to the substance but the quantitative interpretation of the measurement is ambiguous. These analytes should be used as a screening test if a quantitative test is not practical; or as a confirmatory test if the quantitative test is not specific and the origin of the determinant is in question.], mandelic acid and phenylglyoxylic acid [in urine]. Sampling time: end of shift at end of workweek.</li> </ul> |
| toluene                 | NAOSH (Ireland, 1/2011)<br>BMGV: 0.3 mg/g creatinine, o-cresol [in urine]. Sampling time: end<br>of shift - As soon as possible after exposure ceases.<br>BMGV: 0.03 mg/l, toluene [in urine]. Sampling time: end of shift - As<br>soon as possible after exposure ceases.<br>BMGV: 0.02 mg/l, toluene [in blood]. Sampling time: prior to last<br>shift of workweek.  |

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         | Effects  |
|---------------------------|------|-----------------------|------------------------|--------------------|----------|
| xylene                    | DNEL | Long term Oral        | 5 mg/kg bw/day         | General population | Systemic |
|                           | DNEL | Long term Inhalation  | 65.3 mg/m <sup>3</sup> | General population | Local    |
|                           | DNEL | Long term Inhalation  | 65.3 mg/m <sup>3</sup> | General population | Systemic |
|                           | DNEL | Long term Dermal      | 125 mg/kg bw/day       | General population | Systemic |
|                           | DNEL | Long term Dermal      | 212 mg/kg bw/day       | Workers            | Systemic |
|                           | DNEL | Long term Inhalation  | 221 mg/m <sup>3</sup>  | Workers            | Local    |
|                           | DNEL | Long term Inhalation  | 221 mg/m <sup>3</sup>  | Workers            | Systemic |
|                           | DNEL | Short term Inhalation | 260 mg/m <sup>3</sup>  | General population | Local    |
|                           | DNEL | Short term Inhalation | 260 mg/m <sup>3</sup>  | General population | Systemic |
|                           | DNEL | Short term Inhalation | 442 mg/m <sup>3</sup>  | Workers            | Local    |
|                           | DNEL | Short term Inhalation | 442 mg/m <sup>3</sup>  | Workers            | Systemic |
| 3-aminopropyldiethylamine | DNEL | Long term Inhalation  | 24.7 mg/m <sup>3</sup> | Workers            | Systemic |
|                           | DNEL | Long term Dermal      | 3.5 mg/kg bw/day       | Workers            | Systemic |
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| SECTION 8: Exposure controls/personal protection |      |                       |                         |                    |          |
|--|------|-----------------------|-------------------------|--------------------|----------|
|  | DNEL | Long term Inhalation  | 1.8 mg/m <sup>3</sup>   | General population | Systemic |
|  | DNEL | Long term Oral        | 0.5 mg/kg bw/day        | General population |          |
|  | DNEL | Long term Inhalation  | 1.8 mg/m <sup>3</sup>   | General population | Systemic |
|  | DNEL | Long term Dermal      | 3.5 mg/kg bw/day        | Workers            | Systemic |
|  | DNEL | Long term Inhalation  | 24.7 mg/m <sup>3</sup>  | Workers            | Systemic |
| benzyl alcohol                                   | DNEL | Long term Oral        | 4 mg/kg bw/day          | General population | Systemic |
| ,  | DNEL | Long term Dermal      | 4 mg/kg bw/day          | General population | Systemic |
|  | 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 | -        |
|  | 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 |
| 2-methylpropan-1-ol                              | DNEL | Long term Inhalation  | 55 mg/m <sup>3</sup>    | General population | Local    |
|  | DNEL | Long term Inhalation  | 310 mg/m <sup>3</sup>   | Workers            | Local    |
| m-phenylenebis(methylamine)                      | DNEL | Long term Inhalation  | 0.2 mg/m <sup>3</sup>   | Workers            | Local    |
|  | DNEL | Long term Dermal      | 0.33 mg/kg bw/day       | Workers            | Systemic |
|  | DNEL | Long term Inhalation  | 1.2 mg/m <sup>3</sup>   | Workers            | Systemic |
| ethylbenzene                                     | DMEL | Long term Inhalation  | 442 mg/m <sup>3</sup>   | Workers            | Local    |
| ,<br>,   | DMEL | Short term Inhalation | 884 mg/m <sup>3</sup>   | Workers            | Systemic |
|  | DNEL | Long term Oral        | 1.6 mg/kg bw/day        | General population |          |
|  | DNEL | Long term Inhalation  | 15 mg/m <sup>3</sup>    | General population | -        |
|  | DNEL | Long term Inhalation  | 77 mg/m <sup>3</sup>    | Workers            | Systemic |
|  | DNEL | Long term Dermal      | 180 mg/kg bw/day        | Workers            | Systemic |
|  | DNEL | Short term Inhalation | 293 mg/m <sup>3</sup>   | Workers            | Local    |
| N-(3-(trimethoxysilyl)propyl)<br>ethylenediamine | DNEL | Long term Inhalation  | 0.1 mg/m <sup>3</sup>   | General population | Local    |
|  | DNEL | Long term Inhalation  | 0.6 mg/m <sup>3</sup>   | Workers            | Local    |
|  | DNEL | Long term Oral        | 4 mg/kg bw/day          | General population | Systemic |
|  | 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 | Long term Inhalation  | 26 mg/m <sup>3</sup>    | General population | Systemic |
|  | DNEL | Long term Inhalation  | 130 mg/m <sup>3</sup>   | Workers            | Systemic |
|  | DNEL | Short term Inhalation | 26400 mg/m <sup>3</sup> | General population | Systemic |
| toluene  | DNEL | Long term Oral        | 8.13 mg/kg bw/day       | General population | Systemic |
|  | DNEL | Long term Inhalation  | 56.5 mg/m <sup>3</sup>  | General population | Local    |
|  | DNEL | Long term Inhalation  | 56.5 mg/m <sup>3</sup>  | General population | Systemic |
|  | DNEL | Long term Inhalation  | 192 mg/m³               | Workers            | Local    |
|  | DNEL | Long term Inhalation  | 192 mg/m³               | Workers            | Systemic |
|  | DNEL | Long term Dermal      | 226 mg/kg bw/day        | General population | Systemic |
|  | DNEL | Short term Inhalation | 226 mg/m <sup>3</sup>   | General population | Local    |
|  | DNEL | Short term Inhalation | 226 mg/m <sup>3</sup>   | General population | Systemic |
|  | DNEL | Long term Dermal      | 384 mg/kg bw/day        | Workers            | Systemic |
|  | DNEL | Short term Inhalation | 384 mg/m <sup>3</sup>   | Workers            | Local    |
|  | DNEL | Short term Inhalation | 384 mg/m³               | Workers            | Systemic |

**PNECs** 

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

| Product/ingredient name   | Туре | Compartment Detail     | Value           | Method Detail            |
|---------------------------|------|------------------------|-----------------|--------------------------|
| xylene                    | -    | Fresh water            | 0.327 mg/l      | -                        |
|                           | -    | Marine water           | 0.327 mg/l      | -                        |
|                           | -    | Sewage Treatment Plant | 6.58 mg/l       | -                        |
|                           | -    | Fresh water sediment   | 12.46 mg/kg dwt | -                        |
|                           | -    | Marine water sediment  | 12.46 mg/kg dwt | -                        |
|                           | -    | Soil                   | 2.31 mg/kg      | -                        |
| 3-aminopropyldiethylamine | -    | Fresh water            | 0.03 mg/l       | Assessment Factors       |
|                           | -    | Marine water           | 0.003 mg/l      | Assessment Factors       |
|                           | -    | Sewage Treatment Plant | 10 mg/l         | Assessment Factors       |
|                           | -    | Fresh water sediment   | 0.418 mg/kg dwt | Equilibrium Partitioning |
|                           | -    | Fresh water sediment   | 0.042 mg/kg dwt | Equilibrium Partitioning |
|                           | -    | Soil                   | 0.066 mg/kg dwt | Equilibrium Partitioning |
| 2-methylpropan-1-ol       | -    | Fresh water            | 0.4 mg/l        | Assessment Factors       |
|                           | -    | Marine water           | 0.04 mg/l       | Assessment Factors       |
|                           | -    | Sewage Treatment Plant | 10 mg/l         | Assessment Factors       |
|                           | -    | Fresh water sediment   | 1.56 mg/kg dwt  | Equilibrium Partitioning |
|                           | -    | Marine water sediment  | 0.156 mg/kg dwt | -                        |
|                           | -    | Soil                   | 0.076 mg/kg dwt | Equilibrium Partitioning |
| ethylbenzene              | -    | Fresh water            | 0.1 mg/l        | Assessment Factors       |
|                           | -    | Marine water           | 0.01 mg/l       | Assessment Factors       |
|                           | -    | Sewage Treatment Plant | 9.6 mg/l        | Assessment Factors       |
|                           | -    | Fresh water sediment   | 13.7 mg/kg dwt  | Equilibrium Partitioning |
|                           | -    | Marine water sediment  | 1.37 mg/kg dwt  | Equilibrium Partitioning |
|                           | -    | Soil                   | 2.68 mg/kg dwt  | Equilibrium Partitioning |
|                           | -    | Secondary Poisoning    | 20 mg/kg        | -                        |
| toluene                   | -    | Fresh water            | 0.68 mg/l       | Sensitivity Distribution |
|                           | -    | Marine water           | 0.68 mg/l       | Sensitivity Distribution |
|                           | -    | Sewage Treatment Plant | 13.61 mg/l      | Sensitivity Distribution |
|                           | -    | Fresh water sediment   | 16.39 mg/kg dwt | Equilibrium Partitioning |
|                           | -    | Marine water sediment  | 16.39 mg/kg dwt | -                        |

| 8.2 Exposure controls                         |             |   |
|---|-------------|---|
| Appropriate engineering controls              | :           | Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.  |
| Individual protection measu                   | <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<br><u>Skin protection</u> | :           | Chemical splash goggles and face shield. Use eye protection according to EN 166.  |
| Hand protection                               | :           |   |
|   |             |   |

| Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Commission Regulation (EU) |  |
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# **SECTION 8: Exposure controls/personal protection**

|                                 | Chemical-resistant, impervious gloves complying with an approved standard should be<br>worn at all times when handling chemical products if a risk assessment indicates this<br>is necessary. Considering the parameters specified by the glove manufacturer, check<br>during use that the gloves are still retaining their protective properties. It should be<br>noted that the time to breakthrough for any glove material may be different for different<br>glove manufacturers. In the case of mixtures, consisting of several substances, the<br>protection time of the gloves cannot be accurately estimated. When prolonged or<br>frequently repeated contact may occur, a glove with a protection class of 6<br>(breakthrough time greater than 480 minutes according to EN 374) is recommended.<br>When only brief contact is expected, a glove with a protection class of 2 or higher<br>(breakthrough time greater than 30 minutes according to EN 374) is recommended.<br>The user must check that the final choice of type of glove selected for handling this<br>product is the most appropriate and takes into account the particular conditions of use,<br>as included in the user's risk assessment. |
|---------------------------------|--|
| Gloves                          | : butyl rubber   |
| Body protection                 | : 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. When there is a risk of ignition from static electricity, wear anti-<br>static protective clothing. For the greatest protection from static discharges, clothing<br>should include anti-static overalls, boots and gloves. Refer to European Standard EN<br>1149 for further information on material and design requirements and test methods.   |
| Other skin protection           | Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.  |
| 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<br>they comply with the requirements of environmental protection legislation. In some<br>cases, fume scrubbers, filters or engineering modifications to the process equipment<br>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   | : Liquid.  |
| Colour   | : Colourless.  |
| Odour  | : Aromatic.  |
| Melting point/freezing point                             | : Not determined.  |
| Boiling point or initial boiling point and boiling range | : >37.78°C   |
| Flammability<br>Lower and upper explosion<br>limit       | <ul> <li>Not determined. There are no data available on the mixture itself.</li> <li>Not available.</li> </ul> |
| Flash point  | : Closed cup: 30°C   |
| Auto-ignition temperature                                | :  |
| English (GB)   | Ireland  |

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|---|----------------------------|---|---------------------------------------|---------------------------------|--|----------------|------------|------------------------|
| SECTION 9: Physical a   | nd                         | chemical pro  | perties                               |                                 |  |                |            |                        |
|   |                            | Ingredient name   |                                       | °C                              | °F   |                | Method     |                        |
|   |                            | 2-methylpropan-1-ol   |                                       | 415                             | 779  |                |            |                        |
| Decomposition temperature   | :                          | Stable under recom  | mended st                             | orage a                         | nd handling c                                | ondition       | s (see Sec | tion 7).               |
| рН  |                            | Not applicable. insol   |                                       | -                               | 0  |                | ,          | ,                      |
| Viscosity   |                            | Dynamic (room tem<br>Kinematic (room ten<br>Kinematic (40°C): >2  | nperature):                           |                                 |  |                |            |                        |
| Viscosity   | :                          | 30 - <40 s (ISO 6mr   | n)                                    |                                 |  |                |            |                        |
| Solubility  | :                          |   |                                       |                                 |  |                |            |                        |
| Media   |                            | Result  |                                       |                                 |  |                |            |                        |
| cold water  |                            | Not soluble   | Not soluble                           |                                 |  |                |            |                        |
|   |                            |   |                                       |                                 |  |                |            |                        |
| Partition coefficient n-octanol water (log Pow)   | 1 :                        | Not applicable.   |                                       |                                 |  |                |            |                        |
| water (log Pow)   | / :<br>:                   | Not applicable.   | Vapou                                 | ır Press                        | sure at 20°C                                 | Va             | oour press | sure at 50°C           |
| water (log Pow)   | / :<br>:                   | Not applicable.   | Vapou<br>mm Hg                        |                                 | sure at 20°C<br>Method                       | Va<br>mm<br>Hg | oour press | sure at 50°C           |
| water (log Pow)   | :                          |   | · · ·                                 | kPa                             | 1  | mm             |            | 1                      |
| water (log Pow)<br>Vapour pressure  | :                          | Ingredient name   | mm Hg                                 | kPa                             | Method<br>DIN EN                             | mm             |            | 1                      |
| water (log Pow)<br>Vapour pressure<br>Relative density  | :                          | Ingredient name<br>2-methylpropan-1-ol  | mm Hg                                 | kPa                             | Method<br>DIN EN                             | mm             |            | 1                      |
| water (log Pow)<br>Vapour pressure<br>Relative density<br><u>Particle characteristics</u>   | :                          | Ingredient name<br>2-methylpropan-1-ol  | mm Hg                                 | kPa                             | Method<br>DIN EN                             | mm             |            | 1                      |
| water (log Pow)<br>Vapour pressure<br>Relative density<br><u>Particle characteristics</u><br>Median particle size<br>.2 Other information                                     | :                          | Ingredient name<br>2-methylpropan-1-ol<br>0.94<br>Not applicable.   | <pre></pre>                           | kPa                             | Method<br>DIN EN                             | mm             |            | 1                      |
| water (log Pow)<br>Vapour pressure<br>Relative density<br><u>Particle characteristics</u><br>Median particle size<br>.2 Other information                                     | :                          | Ingredient name<br>2-methylpropan-1-ol<br>0.94<br>Not applicable.   | <pre></pre>                           | kPa                             | Method<br>DIN EN                             | mm             |            | sure at 50°C<br>Method |
| water (log Pow)<br>Vapour pressure<br>Relative density<br><u>Particle characteristics</u><br>Median particle size<br>0.2 Other information                                    | :<br>:<br>:<br>:<br>:<br>: | Ingredient name<br>2-methylpropan-1-ol<br>0.94<br>Not applicable.   | <pre>es not explos</pre>              | kPa<br><1.6                     | Method<br>DIN EN<br>13016-2                  | mm<br>Hg       | kPa        | Method                 |
| water (log Pow)<br>Vapour pressure<br>Relative density<br><u>Particle characteristics</u><br>Median particle size<br>0.2 Other information<br>9.2.1 Information with regard t | :<br>:<br>:<br>:<br>:<br>: | Ingredient name<br>2-methylpropan-1-ol<br>0.94<br>Not applicable.<br>ysical hazard class<br>The product itself is | <pre>es not explos air is possi</pre> | kPa<br><1.6<br>ive, but<br>ble. | Method<br>DIN EN<br>13016-2<br>the formation | mm<br>Hg       | kPa        | Method                 |

| 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 |

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## **SECTION 11: Toxicological information**

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

The mixture has been assessed following the conventional method of the CLP Regulation (EC) No 1272/2008 and is classified for toxicological properties accordingly.

Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

May cause respiratory irritation.

#### Acute toxicity

| Product/ingredient name                          | Result                    | Species       | Dose                | Exposure     |
|--|---------------------------|---------------|---------------------|--------------|
| xylene   | LD50 Dermal               | Rabbit        | 1.7 g/kg            | -            |
|  | LD50 Oral                 | Rat           | 4.3 g/kg            | -            |
| 3-aminopropyldiethylamine                        | LD50 Dermal               | Rabbit        | 524 mg/kg           | -            |
|  | LD50 Oral                 | Rat           | 830 mg/kg           | -            |
| benzyl alcohol                                   | LC50 Inhalation Dusts and | Rat           | >5 mg/l             | 4 hours      |
|  | mists                     | <b>D</b> 11 1 |                     |              |
|  | LD50 Dermal               | Rabbit        | >2000 mg/kg         | -            |
|  | LD50 Oral                 | Rat           | 1200 mg/kg          | -            |
| 2-methylpropan-1-ol                              | LC50 Inhalation Vapour    | Rat           | 24.6 mg/l           | 4 hours      |
|  | LD50 Dermal               | Rabbit        | 2460 mg/kg          | -            |
|  | LD50 Oral                 | Rat           | 2830 mg/kg          | -            |
| m-phenylenebis(methylamine)                      | LC50 Inhalation Gas.      | Rat           | 700 ppm             | 1 hours      |
|  | LD50 Dermal               | Rat - Male,   | >3100 mg/kg         | -            |
|  |                           | Female        |                     |              |
|  | LD50 Oral                 | Rat           | 930 mg/kg           | -            |
| ethylbenzene                                     | LC50 Inhalation Vapour    | Rat           | 17.8 mg/l           | 4 hours      |
|  | LD50 Dermal               | Rabbit        | 17.8 g/kg           | -            |
|  | LD50 Oral                 | Rat           | 3.5 g/kg            | -            |
| N-(3-(trimethoxysilyl)propyl)<br>ethylenediamine | LD50 Dermal               | Rabbit        | >2000 mg/kg         | -            |
| etrylenediamine                                  | LD50 Oral                 | Rat           | 2413 mg/kg          |              |
| toluene  | LC50 Inhalation Vapour    | Rat           | 49 g/m <sup>3</sup> | -<br>4 hours |
| loluene  | LD50 Dermal               | Rabbit        | 8.39 g/kg           | + nours      |
|  |                           | Rat           |                     |              |
|  | LD50 Oral                 | Rat           | 5580 mg/kg          | -            |

#### Acute toxicity estimates

| Route                | ATE value     |  |  |
|----------------------|---------------|--|--|
| Øral                 | 2609.85 mg/kg |  |  |
| Dermal               | 2136.49 mg/kg |  |  |
| Inhalation (gases)   | 66176.47 ppm  |  |  |
| Inhalation (vapours) | 41.71 mg/l    |  |  |

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

**Irritation/Corrosion** 

| Product/ingredient name     | Result                   | Species | Score | Exposure        | Observation |
|-----------------------------|--------------------------|---------|-------|-----------------|-------------|
| xylene                      | Skin - Moderate irritant | Rabbit  | -     | 24 hours 500 mg | -           |
| 3-aminopropyldiethylamine   | Skin - Visible necrosis  | Rabbit  | -     | 1 minutes       | 8 days      |
| m-phenylenebis(methylamine) | Skin - Severe irritant   | Rat     | -     | 4 hours         | 4 hours     |

#### **Conclusion/Summary**

| Ski | n |  |  |  |
|-----|---|--|--|--|
|     |   |  |  |  |

Causes severe burns.Causes serious eye damage.

Eyes

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

#### **Respiratory or skin sensitization**

| English (GB) | Ireland | 13/20 |
|--------------|---------|-------|
|              |         |       |

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## **SECTION 11: Toxicological information**

| Product/ingredient name     | Route of exposure | Species | Result      |
|-----------------------------|-------------------|---------|-------------|
| m-phenylenebis(methylamine) | skin              | Mouse   | Sensitising |

#### **Conclusion/Summary**

- : May cause an allergic skin reaction.
- Respiratory

Skin

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

#### **Mutagenicity**

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

#### **Carcinogenicity**

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

#### **Reproductive toxicity**

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<br>2-methylpropan-1-ol                           | Category 3<br>Category 3<br>Category 3 | -                 | Respiratory tract irritation<br>Respiratory tract irritation<br>Narcotic effects |
| N-(3-(trimethoxysilyl)propyl)ethylenediamine<br>toluene | Category 3<br>Category 3               | -                 | Respiratory tract irritation<br>Narcotic effects                                 |

#### **Conclusion/Summary**

May cause respiratory irritation.

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

| Product/ingredient name | Category   | Route of exposure | Target organs  |
|-------------------------|------------|-------------------|----------------|
| ethylbenzene            | Category 2 | -                 | hearing organs |
| toluene                 | Category 2 |                   | -              |

#### **Conclusion/Summary**

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

1

#### **Aspiration hazard**

| Product/ingredient name | Result                         |
|-------------------------|--------------------------------|
| xylene                  | ASPIRATION HAZARD - Category 1 |
| ethylbenzene            | ASPIRATION HAZARD - Category 1 |
| toluene                 | ASPIRATION HAZARD - Category 1 |

#### **Conclusion/Summary**

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

| Information on likely         | 1  | Not available. |
|-------------------------------|----|----------------|
| routes of exposure            |    |                |
| Potential acute health effect | ts |                |

| Inhalation          | : May cause respiratory irritation.  |
|---------------------|--|
| Ingestion           | : No known significant effects or critical hazards.                                |
| Skin contact        | : Causes severe burns. Defatting to the skin. May cause an allergic skin reaction. |
| Eye contact         | : Causes serious eye damage.   |
| Symptoms related to | the physical, chemical and toxicological characteristics                           |

| English (GB) | Ireland | 14/20 |
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| Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Commission Regulation (EU | ) |
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| SECTION 11: Toxico             | gical information  |  |
| Inhalation                     | Adverse symptoms may include the following:<br>respiratory tract irritation<br>coughing  |  |
| Ingestion                      | Adverse symptoms may include the following: stomach pains  |  |
| Skin contact                   | Adverse symptoms may include the following:<br>pain or irritation<br>redness<br>dryness<br>cracking<br>blistering may occur  |  |
| Eye contact                    | Adverse symptoms may include the following:<br>pain<br>watering<br>redness   |  |
| Delayed and immediate effe     | as well as chronic effects from short and long-term  | <u>exposure</u>  |
| <u>Short term exposure</u>     |  |  |
| Potential immediate<br>effects | No known significant effects or critical hazards.  |  |
| Potential delayed effects      | No known significant effects or critical hazards.  |  |
| <u>Long term exposure</u>      |  |  |
| Potential immediate<br>effects | No known significant effects or critical hazards.  |  |
|                                | No known significant effects or critical hazards.  |  |
| Potential chronic health eff   | <u>}</u>   |  |
| General                        | Prolonged or repeated contact can defat the skin and lead<br>dermatitis. Once sensitized, a severe allergic reaction mexposed to very low levels.  |  |
| Carcinogenicity                | No known significant effects or critical hazards.  |  |
| Mutagenicity                   | No known significant effects or critical hazards.  |  |
| Reproductive toxicity          | No known significant effects or critical hazards.  |  |
| Other information              | Prolonged or repeated contact may dry skin and cause in<br>high vapor concentrations may cause irritation of the res<br>brain and nervous system damage. Inhalation of vapour/<br>the recommended exposure limits causes headaches, d<br>lead to unconsciousness or death. Trimethoxysilanes are<br>hydrolyzed or ingested. If swallowed, methanol may be h<br>blindness. Contains a substance that may emit formalde<br>life and/or during cure at curing temperatures greater that<br>skin and clothing. Exposure to amine vapor has been rep<br>corneal edema described as blue haze, halo effect, fogg<br>hours. This condition is typically temporary and does no<br>effects. When the proper eye protection specified in Sec | piratory system and permanent<br>/aerosol concentrations above<br>rowsiness and nausea and may<br>e capable of forming methanol in<br>narmful or fatal or cause<br>hyde if stored beyond its shelf<br>an 60C/140F. Avoid contact with<br>ported to cause transient<br>by or blurred vision for several<br>t cause permanent visual |

#### 11.2 Information on other hazards

#### 11.2.1 Endocrine disrupting properties

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

#### **11.2.2 Other information**

Not available.

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## **SECTION 12: Ecological information**

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

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

#### 12.1 Toxicity

| Product/ingredient name                      | Result                          | Species            | Exposure |
|--|---------------------------------|--------------------|----------|
| 3-aminopropyldiethylamine                    | Acute EC50 30.2 mg/l            | Daphnia            | 48 hours |
|  | Acute EC50 146.6 mg/l           | Fish               | 96 hours |
| 2-methylpropan-1-ol                          | Acute EC50 1100 mg/l            | Daphnia            | 48 hours |
| ethylbenzene                                 | Acute EC50 1.8 mg/l Fresh water | Daphnia            | 48 hours |
|  | Chronic NOEC 1 mg/l Fresh       | Daphnia -          | -        |
|  | water                           | Ceriodaphnia dubia |          |
| N-(3-(trimethoxysilyl)propyl)ethylenediamine | EC50 597 mg/l                   | ,<br>Fish          | 96 hours |

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

#### 12.2 Persistence and degradability

| Product/ingredient name  | Test           | Re   | esult             |                  | Dose  |                | Inoculum                                  |
|--|----------------|--|-------------------|------------------|-------|----------------|---|
| 3-aminopropyldiethylamine<br>ethylbenzene  | OECD 301A<br>- | 90 % - Readily - 28 days<br>79 % - Readily - 10 days |                   | -                |       | -              |   |
| Product/ingredient name  |                |  | Aquatic half-life | Photo            | lysis | Bic            | degradability                             |
| xylene<br>3-aminopropyldiethylamine<br>benzyl alcohol<br>ethylbenzene<br>toluene |                |  | -<br>-<br>-<br>-  | -<br>-<br>-<br>- |       | Re<br>Re<br>Re | adily<br>adily<br>adily<br>adily<br>adily |

#### 12.3 Bioaccumulative potential

| Product/ingredient name     | LogPow | BCF         | Potential |  |
|-----------------------------|--------|-------------|-----------|--|
| xylene                      | 3.12   | 7.4 to 18.5 | Low       |  |
| benzyl alcohol              | 0.87   | -           | Low       |  |
| 2-methylpropan-1-ol         | 1      | -           | Low       |  |
| m-phenylenebis(methylamine) | 0.18   | 2.69        | Low       |  |
| ethylbenzene                | 3.6    | 79.43       | Low       |  |
| toluene                     | 2.73   | 8.32        | Low       |  |

#### **12.4 Mobility in soil**

| Soil/water partition | : Not available. |
|----------------------|------------------|
| coefficient (Koc)    |                  |
| 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

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

| Engl | lish ( | (GB) |
|------|--------|------|
|      |        |      |

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**SECTION 12: Ecological information** 

#### 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**

#### Product

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

#### Hazardous waste

#### European waste catalogue (EWC)

| Waste code          | Waste designation  |
|---------------------|--|
| 08 01 11*           | waste paint and varnish containing organic solvents or other hazardous substances  |
| ackaging            |  |
| 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   |
| Special precautions | taken when h<br>Empty contai<br>residues may<br>Do not cut, w | I and its container must be disposed of in a safe way. Care should be<br>nandling emptied containers that have not been cleaned or rinsed out.<br>iners or liners may retain some product residues. Vapour from product<br>y create a highly flammable or explosive atmosphere inside the container.<br>veld or grind used containers unless they have been cleaned thoroughly<br>void dispersal of spilt material and runoff and contact with soil, waterways,<br>ewers. |

# **SECTION 14: Transport information**

|                                    | ADR/RID                        | ADN                            | IMDG                           | ΙΑΤΑ                           |
|------------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| 14.1 UN number<br>or ID number     | UN3470                         | UN3470                         | UN3470                         | UN3470                         |
| 14.2 UN proper shipping name       | PAINT, CORROSIVE,<br>FLAMMABLE | PAINT, CORROSIVE,<br>FLAMMABLE | PAINT, CORROSIVE,<br>FLAMMABLE | PAINT, CORROSIVE,<br>FLAMMABLE |
| 14.3 Transport<br>hazard class(es) | 8 (3)                          | 8 (3)                          | 8 (3)                          | 8 (3)                          |
| 14.4 Packing<br>group              | II                             | II                             | II                             | II                             |
| 14.5<br>Environmental<br>hazards   | No.                            | Yes.                           | No.                            | No.                            |
| English (G                         | В)                             | Irela                          | and                            | 17/20                          |

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

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|-----------------------------------|----------------------------|------------------|------------------|------------------|--|
| SECTION 14: Transport information |                            |                  |                  |                  |  |
| Marine pollutant substances       | Not applicable.            | Not applicable.  | Not applicable.  | Not applicable.  |  |
|                                   |                            |                  |                  |                  |  |

#### Additional information

| ADR/RID                   | : None identified.   |
|---------------------------|--|
| Tunnel code               | : (D/E)  |
| ADN                       | : The product is only regulated as an environmentally hazardous substance when transported in tank vessels.  |
| IMDG                      | : None identified.   |
| ΙΑΤΑ                      | : None identified.   |
| 14.6 Special pred<br>user | <ul> <li>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.</li> </ul> |
| 14.7 Maritime tra         | • • • •  |

bulk according to IMO instruments

## **SECTION 15: Regulatory information**

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

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

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

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

# Product/ingredient nameEntry Number ( REACH )PHENGUARD 610/780/985 HARDENER3toluene48

Labelling

: Not applicable.

Explosive precursors : Not applicable.

Ozone depleting substances (1005/2009/EU) Not listed.

#### Seveso Directive

This product is controlled under the Seveso Directive.

### Danger criteria

Category

P5c

# 15.2 Chemical safety assessment

: No Chemical Safety Assessment has been carried out.

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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

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

| Classification          | Justification         |
|-------------------------|-----------------------|
| Flam. Liq. 3, H226      | On basis of test data |
| Skin Corr. 1B, H314     | Calculation method    |
| Eye Dam. 1, H318        | Calculation method    |
| Skin Sens. 1, H317      | Calculation method    |
| STOT SE 3, H335         | Calculation method    |
| Aquatic Chronic 3, H412 | Calculation method    |

Full text of abbreviated H statements

| Highly flammable liquid and vapour.                      |
|--|
| Flammable liquid and vapour.                             |
| Harmful if swallowed.                                    |
| May be fatal if swallowed and enters airways.            |
| Toxic in contact with skin.                              |
| Harmful in contact with skin.                            |
| Causes severe skin burns and eye damage.                 |
| Causes skin irritation.                                  |
| May cause an allergic skin reaction.                     |
| Causes serious eye damage.                               |
| Causes serious eye irritation.                           |
| Harmful if inhaled.                                      |
| May cause respiratory irritation.                        |
| May cause drowsiness or dizziness.                       |
| Suspected of damaging the unborn child.                  |
| May cause damage to organs through prolonged or repeated |
| exposure.  |
| Harmful to aquatic life with long lasting effects.       |
| Corrosive to the respiratory tract.                      |
|  |

Full text of classifications [CLP/GHS]

| English (GB)      | Ireland                                | 19/20        |
|-------------------|--|--------------|
| Skin Corr. 1B     | SKIN CORROSION/IRRITATION - Category 1 | 3            |
| Repr. 2           | REPRODUCTIVE TOXICITY - Category 2     |              |
| Flam. Liq. 3      | FLAMMABLE LIQUIDS - Category 3         |              |
| Flam. Liq. 2      | FLAMMABLE LIQUIDS - Category 2         |              |
| Eye Irrit. 2      | SERIOUS EYE DAMAGE/EYE IRRITATION - (  | Category 2   |
| Eye Dam. 1        | SERIOUS EYE DAMAGE/EYE IRRITATION - (  |              |
| Asp. Tox. 1       | ASPIRATION HAZARD - Category 1         |              |
| Aquatic Chronic 3 | LONG-TERM (CHRONIC) AQUATIC HAZARD     | - Category 3 |
| Acute Tox. 4      | ACUTE TOXICITY - Category 4            |              |
| Acute Tox. 3      | ACUTE TOXICITY - Category 3            |              |

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|---|--|--|--|
| SECTION 16: Other information                         |  |  |  |
| Skin Irrit. 2   | SKIN CORROSION/IRRITATION - Category 2               |  |  |
| Skin Sens. 1  | SKIN SENSITISATION - Category 1                      |  |  |
| Skin Sens. 1B   | SKIN SENSITISATION - Category 1B                     |  |  |
| STOT RE 2   | SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - |  |  |
|   | Category 2   |  |  |
| STOT SE 3   | SPEČIFÍC TARGET ORGAN TOXICITY - SINGLE EXPOSURE -   |  |  |
|   | Category 3   |  |  |

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|---------------------------------|------------------|
| Date of previous issue          | : 7 October 2024 |
| Prepared by                     | : EHS            |
| Version                         | : 2.07           |

#### **Disclaimer**

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