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

1.1 Product identifier

Product name: AMERLOCK SEALER CURE
Product code: 00285432

Other means of identification
Not available.

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

Product use: Professional applications.
Use of the substance/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 SPRL/BVBA
Tweemontstraat 104
B-2100 Deurne
Belgium
Telephone +32-33606311
Fax +32-33606435

E-mail address of person responsible for this SDS: PMC.Safety@PPG.com

1.4 Emergency telephone number

National advisory body/Poison Centre

Telephone number: National Poison Information Centre at Beaumont Hospital. Tel: +353 1 8092566, email: npicdublin@beaumont.ie

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
Carc. 2, H351
STOT SE 3, H335
STOT RE 2, H373
Aquatic Chronic 2, H411
SECTION 2: Hazards identification

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

See Section 16 for the full text of the H statements declared above.
See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms:

- 
- 
- 
- 

Signal word: Danger

Hazard statements:
- Harmful if swallowed or if inhaled.
- Causes severe skin burns and eye damage.
- May cause an allergic skin reaction.
- Suspected of causing cancer.
- May cause respiratory irritation.
- May cause damage to organs through prolonged or repeated exposure.
- Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention: Wear protective gloves. Wear protective clothing. Wear eye or face protection. Do not breathe vapour.

Response:
- IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF SWALLOWED: Immediately call a POISON CENTER or physician. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage: Store locked up.

Disposal: Not applicable.

Hazardous ingredients:
- furfuryl alcohol
- Poly[oxy(methyl-1,2-ethanediyl)], α-(2-aminomethylthylethyl)-ω-(2-aminomethylethoxy)-Mixture of Cycloaliphatic Amines
- Fatty acids, tall-oil, reaction products with diethylenetriamine
- 3,6-diazaoctanethylenediamin
- 4-nonylphenol, branched

Supplemental label elements: Not applicable.

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

Special packaging requirements:
- Containers to be fitted with child-resistant fastenings: Not applicable.
- Tactile warning of danger: Not applicable.

2.3 Other hazards
SECTION 2: Hazards identification

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. Prolonged or repeated contact may dry skin and cause irritation. Contains a substance that may emit formaldehyde if stored beyond its shelf life and/or during cure at curing temperatures greater than 60°C/140°F.

SECTION 3: Composition/information on ingredients

3.2 Mixtures: Mixture

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Identifiers</th>
<th>% by weight</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poly[oxy(methyl-1,2-ethanediyl)], α-(2-aminomethylethyl)-ω-(2-aminomethyleneoxy)- (n = 2-6)</td>
<td>REACH #: 01-2119557899-12 EC: 618-561-0 CAS: 9046-10-0</td>
<td>≥10 - ≤25</td>
<td>Skin Irrit. 1C, H314 Eye Dam. 1, H318 Aquatic Chronic 3, H412 [1]</td>
</tr>
<tr>
<td>Formaldehyde, polymer with 1,3-dimethylbenzene</td>
<td>CAS: 26139-75-3</td>
<td>≥10 - ≤25</td>
<td>Skin Irrit. 2, H314 Eye Irrit. 2, H319 STOT SE 3, H335 [1]</td>
</tr>
<tr>
<td>benzyl alcohol</td>
<td>REACH #: 01-2119492630-38 EC: 202-859-9 CAS: 100-51-6 Index: 603-057-00-5</td>
<td>≥5.0 - ≤10</td>
<td>Acute Tox. 4, H302 Acute Tox. 4, H332 Eye Irrit. 2, H319 [1]</td>
</tr>
<tr>
<td>Mixture of Cycloaliphatic Amines</td>
<td>CAS: SUB100744</td>
<td>≥5.0 - ≤10</td>
<td>Acute Tox. 4, H302 Eye Irrit. 2, H319 [1]</td>
</tr>
<tr>
<td>Fatty acids, tall-oil, reaction products with diethylenetriamine</td>
<td>EC: 263-160-2 CAS: 61790-69-0</td>
<td>≥1.0 - ≤3.5</td>
<td>Acute Tox. 4, H302 Acute Tox. 4, H302 Skin Irrit. 1B, H314 Eye Dam. 1, H318 STOT RE 2, H373 (oral) Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1) [1]</td>
</tr>
<tr>
<td>TERTIARY AMINE</td>
<td>CAS: SUB100742</td>
<td>≥1.0 - ≤5.0</td>
<td>Acute Tox. 4, H302 Eye Irrit. 2, H319 [1]</td>
</tr>
<tr>
<td>3,6-diazaoctanethylenediamin</td>
<td>EC: 203-950-6 CAS: 112-24-3 Index: 612-059-00-5</td>
<td>≥1.0 - ≤3.3</td>
<td>Acute Tox. 4, H302 Acute Tox. 4, H312 Skin Irrit. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 3, H412 [1]</td>
</tr>
<tr>
<td>4-nonylphenol, branched</td>
<td>REACH #: 01-2119510715-45 EC: 284-325-5 CAS: 84852-15-3 Index: 601-053-00-8</td>
<td>≥0.10 - ≤2.1</td>
<td>Acute Tox. 4, H302 Skin Irrit. 1B, H314 Eye Dam. 1, H318 Repr. 2, H361fd (Fertility and Unborn child) Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 [1][5]</td>
</tr>
</tbody>
</table>
SECTION 3: Composition/information on ingredients

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

Type
[1] Substance classified with a health or environmental hazard
[2] Substance with a workplace exposure limit
[5] Substance of equivalent concern
[6] Additional disclosure due to company policy

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
Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

Skin contact
Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners.

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 effects

Eye contact
Causes serious eye damage.

Inhalation
Harmful if inhaled. May cause respiratory irritation.

Skin contact
Causes severe burns. Defatting to the skin. May cause an allergic skin reaction.

Ingestion
Harmful if swallowed. Corrosive to the digestive tract. Causes burns.

Over-exposure signs/symptoms

Eye contact
Adverse symptoms may include the following: pain, watering, redness

Inhalation
Adverse symptoms may include the following: respiratory tract irritation, coughing

AMERLOCK SEALER CURE

Code: 00285432  Date of issue/Date of revision: 12 November 2019

SECTION 4: First aid measures

**Skin contact**
- Adverse symptoms may include the following:
  - pain or irritation
  - redness
  - dryness
  - cracking
  - blistering may occur

**Ingestion**
- Adverse symptoms may include the following:
  - stomach pains

4.3 Indication of any immediate medical attention and special treatment needed

**Notes to physician**
- In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

**Specific treatments**
- No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

**Suitable extinguishing media**
- Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing media**
- None known.

5.2 Special hazards arising from the substance or mixture

**Hazard 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:
  - carbon oxides
  - nitrogen oxides
  - Formaldehyde.

5.3 Advice for firefighters

**Special precautions for firefighters**
- 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.

**Special protective equipment for fire-fighters**
- Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel**
- No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

**For emergency responders**
- If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
SECTION 6: Accidental release measures

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.

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 spilt product.

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

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. 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). 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. 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 ingest. Avoid breathing vapour or mist. Avoid release to the environment. Refer to special instructions/safety data sheet. 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 non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material. 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.
SECTION 7: Handling and storage

7.2 Conditions for safe storage, including any 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

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Exposure limit values</th>
</tr>
</thead>
<tbody>
<tr>
<td>furfuryl alcohol</td>
<td>NAOSH (Ireland, 8/2018). Absorbed through skin. OELV-15min: 60 mg/m³ 15 minutes. OELV-15min: 15 ppm 15 minutes. OELV-8hr: 20 mg/m³ 8 hours. OELV-8hr: 5 ppm 8 hours.</td>
</tr>
</tbody>
</table>

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

DNELs

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Type</th>
<th>Exposure</th>
<th>Value</th>
<th>Population</th>
<th>Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>furfuryl alcohol</td>
<td>DNEL</td>
<td>Short term Oral</td>
<td>2.4 mg/kg bw/day</td>
<td>General population</td>
<td>Systemic</td>
</tr>
<tr>
<td></td>
<td>DNEL</td>
<td>Long term Oral</td>
<td>2.4 mg/kg bw/day</td>
<td>General population</td>
<td>Systemic</td>
</tr>
<tr>
<td></td>
<td>DNEL</td>
<td>Long term Dermal</td>
<td>2.4 mg/kg bw/day</td>
<td>General population</td>
<td>Systemic</td>
</tr>
<tr>
<td></td>
<td>DNEL</td>
<td>Long term Dermal</td>
<td>4 mg/kg bw/day</td>
<td>General population</td>
<td>Systemic</td>
</tr>
<tr>
<td></td>
<td>DNEL</td>
<td>Short term Inhalation</td>
<td>8 mg/m³</td>
<td>General population</td>
<td>Systemic</td>
</tr>
<tr>
<td></td>
<td>DNEL</td>
<td>Long term Inhalation</td>
<td>8 mg/m³</td>
<td>General population</td>
<td>Local</td>
</tr>
<tr>
<td></td>
<td>DNEL</td>
<td>Short term Inhalation</td>
<td>8 mg/m³</td>
<td>Workers</td>
<td>Local</td>
</tr>
<tr>
<td></td>
<td>DNEL</td>
<td>Long term Inhalation</td>
<td>8 mg/m³</td>
<td>Workers</td>
<td>Local</td>
</tr>
</tbody>
</table>

English (GB) Ireland 7/18

SECTION 8: Exposure controls/personal protection

Poly(oxy(methyl-1,2-ethanediyl)], α-(2-aminomethyl)ethyl)-ω-(2-aminomethylthoxy)-

**DNE**L

<table>
<thead>
<tr>
<th>Compartment Detail</th>
<th>Value</th>
<th>Method Detail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long term Inhalation</td>
<td>9.3 mg/m³</td>
<td>General population</td>
</tr>
<tr>
<td>Short term Inhalation</td>
<td>1.36 mg/m³</td>
<td>Workers</td>
</tr>
<tr>
<td>Long term Dermal</td>
<td>2.5 mg/kg bw/day</td>
<td>Workers</td>
</tr>
<tr>
<td>Long term Oral</td>
<td>4 mg/kg bw/day</td>
<td>Workers</td>
</tr>
<tr>
<td>Long term Dermal</td>
<td>22 mg/m³</td>
<td>General population</td>
</tr>
<tr>
<td>Long term Inhalation</td>
<td>5.4 mg/m³</td>
<td>General population</td>
</tr>
<tr>
<td>Short term Dermal</td>
<td>8 mg/kg bw/day</td>
<td>Workers</td>
</tr>
<tr>
<td>Short term Oral</td>
<td>20 mg/kg bw/day</td>
<td>Workers</td>
</tr>
<tr>
<td>Short term Dermal</td>
<td>40 mg/kg bw/day</td>
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</tr>
<tr>
<td>Short term Inhalation</td>
<td>22 mg/m³</td>
<td>General population</td>
</tr>
<tr>
<td>Short term Inhalation</td>
<td>27 mg/m³</td>
<td>General population</td>
</tr>
<tr>
<td>Short term Inhalation</td>
<td>0.4 mg/m³</td>
<td>General population</td>
</tr>
<tr>
<td>Short term Inhalation</td>
<td>0.5 mg/m³</td>
<td>General population</td>
</tr>
<tr>
<td>Short term Inhalation</td>
<td>0.8 mg/m³</td>
<td>General population</td>
</tr>
<tr>
<td>Short term Dermal</td>
<td>3.8 mg/kg bw/day</td>
<td>General population</td>
</tr>
<tr>
<td>Short term Dermal</td>
<td>7.5 mg/kg bw/day</td>
<td>General population</td>
</tr>
<tr>
<td>Short term Dermal</td>
<td>7.6 mg/kg bw/day</td>
<td>General population</td>
</tr>
<tr>
<td>Short term Dermal</td>
<td>15 mg/kg bw/day</td>
<td>General population</td>
</tr>
</tbody>
</table>

**PNECs**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Type</th>
<th>Compartment Detail</th>
<th>Value</th>
<th>Method Detail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poly(oxy(methyl-1,2-ethanediyl)], α-(2-aminomethylethyl)-ω-(2-aminomethylethoxy)-</td>
<td>-</td>
<td>Fresh water</td>
<td>0.015 mg/l</td>
<td>Assessment Factors</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>Marine water</td>
<td>0.014 mg/l</td>
<td>Assessment Factors</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>Sewage Treatment</td>
<td>7.5 mg/l</td>
<td>Assessment Factors</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>Plant</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>Fresh water sediment</td>
<td>0.132 mg/kg dwt</td>
<td>Equilibrium Partitioning</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>Marine water sediment</td>
<td>0.125 mg/kg dwt</td>
<td>Equilibrium Partitioning</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>Soil</td>
<td>0.018 mg/kg dwt</td>
<td>Equilibrium Partitioning</td>
</tr>
</tbody>
</table>

8.2 Exposure controls
SECTION 8: Exposure controls/personal protection

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.

Individual protection measures:

Hygiene measures:
Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety 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:
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:
nitrile  neoprene

Body protection:
Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

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 they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state: Liquid.
Colour: Colourless.
Odour: Amine-like. [Strong]
Odour threshold: Not available.
pH: insoluble in water.
SECTION 9: Physical and chemical properties

Melting point/freezing point: May start to solidify at the following temperature: 12°C (53.6°F) This is based on data for the following ingredient: 3,6-diazaoctanethylenediamin. Weighted average: -21.5°C (-6.7°F)

Initial boiling point and boiling range: >37.78°C

Flash point: Closed cup: 80°C

Evaporation rate: Highest known value: 0.04 (furfuryl alcohol) Weighted average: 0.03 compared with butyl acetate

Flammability (solid, gas): liquid

Upper/lower flammability or explosive limits: Greatest known range: Lower: 1.8% Upper: 16.3% (furfuryl alcohol)

Vapour pressure: Highest known value: 0.09 kPa (0.7 mm Hg) (at 20°C)
(Poly[oxy(methyl-1,2-ethanediyl)], α-(2-aminomethylethyl)-ω-(2-aminomethylethoxy)-). Weighted average: 0.05 kPa (0.38 mm Hg) (at 20°C)

Vapour density: Highest known value: 15.4 (Air = 1) (1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich). Weighted average: 6.66 (Air = 1)

Relative density: 1.02

Solubility(ies): Insoluble in the following materials: cold water.

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

Auto-ignition temperature: Lowest known value: 337.78°C (640°F) (3,6-diazaoctanethylenediamin).

Decomposition temperature: Stable under recommended storage and handling conditions (see Section 7).

Viscosity: Kinematic (40°C): <0.14 cm²/s

Explosive properties: The product itself is not explosive, but the formation of an explosive mixture of vapour or dust with air is possible.

Oxidising properties: Product does not present an oxidizing hazard.

9.2 Other information
No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity: No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability: 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.
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 decomposition products: Depending on conditions, decomposition products may include the following materials: carbon oxides nitrogen oxides Formaldehyde.
SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>furfuryl alcohol</td>
<td>LC50</td>
<td>Rat</td>
<td>934 mg/m³</td>
<td>4 hours</td>
</tr>
<tr>
<td></td>
<td>LC50</td>
<td>Rat</td>
<td>233 ppm</td>
<td>4 hours</td>
</tr>
<tr>
<td></td>
<td>LD50</td>
<td>Rabbit</td>
<td>400 mg/kg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LD50</td>
<td>Rat</td>
<td>3825 mg/kg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LD50</td>
<td>Rat</td>
<td>0.132 g/kg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LD50</td>
<td>Rat</td>
<td>2980 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Poly[(oxy(methyl-1,2-ethanediyl)], α-(2-aminomethylethyl)-ω-(2-aminomethylethoxy)]</td>
<td>LD50</td>
<td>Rat</td>
<td>2885 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>benzyl alcohol</td>
<td>LC50</td>
<td>Rat</td>
<td>&gt;4178 mg/m³</td>
<td>4 hours</td>
</tr>
<tr>
<td></td>
<td>LD50</td>
<td>Rabbit</td>
<td>2000 mg/kg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LD50</td>
<td>Rat</td>
<td>1.23 g/kg</td>
<td></td>
</tr>
<tr>
<td>Mixture of Cycloaliphatic Amines</td>
<td>LD50</td>
<td>Rabbit</td>
<td>&gt;1 g/kg</td>
<td>-</td>
</tr>
<tr>
<td>TERTIARY AMINE</td>
<td>LD50</td>
<td>Rabbit</td>
<td>805 mg/kg</td>
<td></td>
</tr>
<tr>
<td>3,6-diazaoctanethylenediamin</td>
<td>LD50</td>
<td>Rabbit</td>
<td>2500 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>4-nonylphenol, branched</td>
<td>LD50</td>
<td>Rabbit</td>
<td>2.14 g/kg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LD50</td>
<td>Rat</td>
<td>1300 mg/kg</td>
<td></td>
</tr>
</tbody>
</table>

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

Acute toxicity estimates

<table>
<thead>
<tr>
<th>Route</th>
<th>ATE value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>1350.01 mg/kg</td>
</tr>
<tr>
<td>Dermal</td>
<td>4805.18 mg/kg</td>
</tr>
<tr>
<td>Inhalation (vapours)</td>
<td>13.96 mg/l</td>
</tr>
<tr>
<td>Inhalation (dusts and mists)</td>
<td>19.06 mg/l</td>
</tr>
</tbody>
</table>

Irritation/Corrosion

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Score</th>
<th>Exposure</th>
<th>Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-nonylphenol, branched</td>
<td>Skin - Erythema/Eschar</td>
<td>Rabbit</td>
<td>4</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Conclusion/Summary

Skin: There are no data available on the mixture itself.

Eyes: There are no data available on the mixture itself.

Respiratory: There are no data available on the mixture itself.

Sensitisation

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Route of exposure</th>
<th>Species</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>3,6-diazaoctanethylenediamin</td>
<td>skin</td>
<td>Guinea pig</td>
<td>Sensitising</td>
</tr>
</tbody>
</table>

Conclusion/Summary

Skin: There are no data available on the mixture itself.

Respiratory: There are no data available on the mixture itself.

Mutagenicity

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

Carcinogenicity

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

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## SECTION 11: Toxicological information

### Reproductive toxicity

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

### Teratogenicity

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

### Specific target organ toxicity (single exposure)

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>furfuryl alcohol</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Respiratory tract irritation</td>
</tr>
<tr>
<td>Formaldehyde, polymer with 1,3-dimethylbenzene</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Respiratory tract irritation</td>
</tr>
</tbody>
</table>

### Specific target organ toxicity (repeated exposure)

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>furfuryl alcohol</td>
<td>Category 2</td>
<td>Not determined Oral</td>
<td>Not determined</td>
</tr>
<tr>
<td>Fatty acids, tall-oil, reaction products with diethylenetriamine</td>
<td>Category 2</td>
<td>Not determined Oral</td>
<td>Not determined</td>
</tr>
</tbody>
</table>

### Aspiration hazard

Not available.

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

### Potential acute health effects

**Inhalation**: Harmful if inhaled. May cause respiratory irritation.

**Ingestion**: Harmful if swallowed. Corrosive to the digestive tract. Causes burns.

**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

**Inhalation**: Adverse symptoms may include the following:
- Respiratory tract irritation
- Coughing

**Ingestion**: Adverse symptoms may include the following:
- Stomach pains

**Skin contact**: Adverse symptoms may include the following:
- Pain or irritation
- Redness
- Dryness
- Cracking
- Blistering may occur

**Eye contact**: Adverse symptoms may include the following:
- Pain
- Watering
- Redness

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

#### Short term exposure

**Potential immediate effects**: Not available.

**Potential delayed effects**: Not available.

#### Long term exposure

**Potential immediate effects**: Not available.
SECTION 11: Toxicological information

Potential delayed effects: Not available.

Potential chronic health effects
Not available.

Conclusion/Summary: Not available.

General: May cause damage to organs through prolonged or repeated exposure. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

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

Mutagenicity: No known significant effects or critical hazards.

Teratogenicity: No known significant effects or critical hazards.

Developmental effects: No known significant effects or critical hazards.

Fertility effects: No known significant effects or critical hazards.

Other information: Not available.

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

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

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

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

Ingestion may cause nausea, diarrhea and vomiting.

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

Contains 3,6-diazaoctanethylenediamin. May produce an allergic reaction.

SECTION 12: Ecological information

12.1 Toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poly[oxy(methyl-1,2-ethanediyl)], α- (2-aminomethylethyl)-ω-(2-aminomethylethoxy)-4-nonylphenol, branched</td>
<td>EC50 15 mg/l</td>
<td>Algae</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 0.221 mg/l</td>
<td>Fish</td>
<td>96 hours</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Aquatic half-life</th>
<th>Photolysis</th>
<th>Biodegradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poly[oxy(methyl-1,2-ethanediyl)], α- (2-aminomethylethyl)-ω-(2-aminomethylethoxy)-benzyl alcohol</td>
<td>-</td>
<td>-</td>
<td>Not readily</td>
</tr>
</tbody>
</table>

12.3 Bioaccumulative potential

English (GB) Ireland 13/18
SECTION 12: Ecological information

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogP&lt;sub&gt;ow&lt;/sub&gt;</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>furfuryl alcohol</td>
<td>0.28</td>
<td>-</td>
<td>low</td>
</tr>
<tr>
<td>benzyl alcohol</td>
<td>1.1</td>
<td>-</td>
<td>low</td>
</tr>
<tr>
<td>3,6-diazaocanethylenediamin</td>
<td>-1.66 to -1.4</td>
<td>-</td>
<td>low</td>
</tr>
<tr>
<td>4-nonylphenol, branched</td>
<td>-</td>
<td>251.19</td>
<td>low</td>
</tr>
</tbody>
</table>

12.4 Mobility in soil

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

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

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

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

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

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

Hazardous waste : Yes.

European waste catalogue (EWC)

<table>
<thead>
<tr>
<th>Waste code</th>
<th>Waste designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>08 01 11*</td>
<td>waste paint and varnish containing organic solvents or other hazardous substances</td>
</tr>
</tbody>
</table>

Packaging

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

<table>
<thead>
<tr>
<th>Type of packaging</th>
<th>European waste catalogue (EWC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Container</td>
<td>15 01 06 mixed packaging</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>14.1 UN number</th>
<th>ADR/RID</th>
<th>ADN</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN3066</td>
<td>UN3066</td>
<td>UN3066</td>
<td>UN3066</td>
<td></td>
</tr>
</tbody>
</table>

14.2 UN proper shipping name

<table>
<thead>
<tr>
<th>14.3 Transport hazard class(es)</th>
<th>8</th>
<th>8</th>
<th>8</th>
<th>8</th>
</tr>
</thead>
</table>

14.4 Packing group

<table>
<thead>
<tr>
<th>14.5 Environmental hazards</th>
<th>II</th>
<th>II</th>
<th>II</th>
<th>II</th>
</tr>
</thead>
</table>

14.6 Special precautions for user

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

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

- **Not applicable.**

Additional information

- **ADR/RID**: The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.
- **Tunnel code**: (E)
- **ADN**: The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.
- **IMDG**: The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.
- **IATA**: The environmentally hazardous substance mark may appear if required by other transportation regulations.

**Marine pollutant substances**

- Not applicable.
- **(Fatty acids, tall-oil, reaction products with diethylenetriamine, 4-nonylphenol, branched)**

**SECTION 15: Regulatory information**

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

<table>
<thead>
<tr>
<th>EU Regulation (EC) No. 1907/2006 (REACH)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annex XIV - List of substances subject to authorisation</td>
</tr>
<tr>
<td>Annex XIV</td>
</tr>
</tbody>
</table>

None of the components are listed.

**Substances of very high concern**

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Intrinsic property</th>
<th>Status</th>
<th>Reference number</th>
<th>Date of revision</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-nonylphenol, branched</td>
<td>Substance of equivalent concern for environment</td>
<td>Candidate</td>
<td>ED/169/2012</td>
<td>12/19/2012</td>
</tr>
</tbody>
</table>

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SECTION 15: Regulatory information

Annex XVII - Restrictions 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

<table>
<thead>
<tr>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>E2</td>
</tr>
</tbody>
</table>

15.2 Chemical safety assessment

No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

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]

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Tox. 4, H302</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Acute Tox. 4, H332</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Skin Corr. 1B, H314</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Eye Dam. 1, H318</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Skin Sens. 1, H317</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Carc. 2, H351</td>
<td>Calculation method</td>
</tr>
<tr>
<td>STOT SE 3, H335</td>
<td>Calculation method</td>
</tr>
<tr>
<td>STOT RE 2, H373</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Aquatic Chronic 2, H411</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>

Full text of abbreviated H statements
SECTION 16: Other information

H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H351 Suspected of causing cancer.
H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.
H373 (oral) May cause damage to organs through prolonged or repeated exposure if swallowed.
H373 May cause damage to organs through prolonged or repeated exposure.
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. 3, H331: ACUTE TOXICITY (inhalation) - Category 3
- Acute Tox. 4, H302: ACUTE TOXICITY (oral) - Category 4
- Acute Tox. 4, H312: ACUTE TOXICITY (dermal) - Category 4
- Acute Tox. 4, H332: ACUTE TOXICITY (inhalation) - Category 4
- Aquatic Acute 1, H400: SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
- Aquatic Chronic 1, H410: LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1
- Aquatic Chronic 2, H411: LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
- Aquatic Chronic 3, H412: LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3
- Carc. 2, H351: CARCINOGENICITY - Category 2
- Eye Dam. 1, H318: SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
- Eye Irrit. 2, H319: SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
- Repr. 2, H361fd: REPRODUCTIVE TOXICITY (Fertility and Unborn child) - Category 2
- Skin Corr. 1B, H314: SKIN CORROSION/IRRITATION - Category 1B
- Skin Corr. 1C, H314: SKIN CORROSION/IRRITATION - Category 1C
- Skin Irrit. 2, H315: SKIN CORROSION/IRRITATION - Category 2
- Skin Sens. 1, H317: SKIN SENSITISATION - Category 1
- STOT RE 2, H373 (oral): SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE (oral) - Category 2
- STOT RE 2, H373: SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
- STOT SE 3, H335: SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3

History

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Date of previous issue : 28 February 2019
Prepared by : EHS
Version : 14.01

Disclaimer
SECTION 16: Other information

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by us, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.