SAFETY DATA SHEET


Date of issue/Date of revision : 21 December 2018
Version : 15.04

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

1.1 Product identifier
   - Product name : PSX 700 RAL 5013 RESIN
   - Product code : 00291634
   - Other means of identification : Not available.

1.2 Relevant identified uses of the substance or mixture and uses advised against
   - Product use : Professional applications, Used by spraying.
   - Use of the substance/mixture : Coating.

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
   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]
     Skin Sens. 1, H317
     Aquatic Chronic 3, H412
   - 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 : 

United Kingdom (UK)
SECTION 2: Hazards identification

Signal word: Warning

Hazard statements:
- May cause an allergic skin reaction.
- Harmful to aquatic life with long lasting effects.

Precautionary statements:

Prevention:
- Wear protective gloves. Avoid release to the environment. Avoid breathing vapour.

Response:
- IF ON SKIN: Take off contaminated clothing and wash it before reuse. If skin irritation or rash occurs: Get medical attention.

Storage:
- Not applicable.

Disposal:
- Not applicable.
P280, P273, P261, P302 + P362+P364, P333 + P313

Hazardous ingredients:
- 4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2, 3-epoxypropane
- bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate
- methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate

Supplemental label elements:

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
- Tactile warning of danger
- Not applicable.

2.3 Other hazards

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

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 Regulation (EC) No. 1272/2008 [CLP]</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate</td>
<td>REACH #: 01-2119959495-22 EC: 500-070-7 CAS: 30583-72-3 EC: 255-437-1 CAS: 41556-26-7</td>
<td>≥25 - ≤50</td>
<td>Skin Sens. 1, H317 Aquatic Chronic 3, H412</td>
<td>[1]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>≤1.8</td>
<td>Skin Sens. 1, H317 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)</td>
<td>[1]</td>
</tr>
<tr>
<td>methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate</td>
<td>EC: 280-060-4 CAS: 82919-37-7</td>
<td>≤0.62</td>
<td>Skin Sens. 1, H317 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)</td>
<td>[1]</td>
</tr>
<tr>
<td>toluene</td>
<td>REACH #: 01-2119471310-51</td>
<td>&lt;1.0</td>
<td>Flam. Liq. 2, H225</td>
<td>[1][2]</td>
</tr>
</tbody>
</table>
SECTION 3: Composition/information on ingredients

<table>
<thead>
<tr>
<th>Code</th>
<th>Date of issue/Date of revision</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSX 700 RAL 5013 RESIN</td>
<td>21 December 2018</td>
</tr>
</tbody>
</table>

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

**Type**

1. Substance classified with a health or environmental hazard
2. Substance with a workplace exposure limit
3. Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
4. Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
5. Substance of equivalent concern
6. Additional disclosure due to company policy

**SUB codes represent substances without registered CAS Numbers.**

SECTION 4: First aid measures

4.1 Description of first aid measures

**Eye contact**

Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek immediate medical advice.

**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. 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**: No known significant effects or critical hazards.
- **Inhalation**: No known significant effects or critical hazards.
- **Skin contact**: May cause an allergic skin reaction.
- **Ingestion**: No known significant effects or critical hazards.

**Over-exposure signs/symptoms**

- **Eye contact**: No specific data.
- **Inhalation**: No specific data.
- **Skin contact**: Adverse symptoms may include the following: irritation, redness.
- **Ingestion**: No specific data.
SECTION 4: First aid measures

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

Hazards from the substance or mixture : In a fire or if heated, a pressure increase will occur and the container may burst. This material is 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 : Decomposition products may include the following materials:
- carbon oxides
- nitrogen oxides
- sulfur oxides
- halogenated compounds
- metal oxide/oxides

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.

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. Avoid breathing 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".

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.
SECTION 6: Accidental release measures

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. 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.

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. 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)
SECTION 7: Handling and storage

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>toluene</td>
<td>EH40/2005 WELs (United Kingdom (UK), 12/2011). Absorbed through skin. STEL: 384 mg/m³ 15 minutes. STEL: 100 ppm 15 minutes. TWA: 191 mg/m³ 8 hours. TWA: 50 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>4,4’-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane</td>
<td>DNEL</td>
<td>Long term Dermal</td>
<td>5.5 mg/kg bw/day</td>
<td>Workers</td>
<td>Systemic</td>
</tr>
<tr>
<td></td>
<td>DNEL</td>
<td>Short term Dermal</td>
<td>5.5 mg/kg bw/day</td>
<td>Workers</td>
<td>Systemic</td>
</tr>
<tr>
<td></td>
<td>DNEL</td>
<td>Long term Dermal</td>
<td>0.021 mg/cm² skin</td>
<td>Workers</td>
<td>Local</td>
</tr>
<tr>
<td></td>
<td>DNEL</td>
<td>Short term Dermal</td>
<td>0.23 mg/cm² skin</td>
<td>Workers</td>
<td>Local</td>
</tr>
<tr>
<td></td>
<td>DNEL</td>
<td>Long term Dermal</td>
<td>3.3 mg/kg bw/day</td>
<td>Consumers</td>
<td>Systemic</td>
</tr>
<tr>
<td></td>
<td>DNEL</td>
<td>Short term Dermal</td>
<td>3.3 mg/kg bw/day</td>
<td>Consumers</td>
<td>Systemic</td>
</tr>
<tr>
<td></td>
<td>DNEL</td>
<td>Long term Dermal</td>
<td>0.021 mg/cm² skin</td>
<td>Consumers</td>
<td>Local</td>
</tr>
<tr>
<td></td>
<td>DNEL</td>
<td>Short term Dermal</td>
<td>0.021 mg/cm² skin</td>
<td>Consumers</td>
<td>Local</td>
</tr>
<tr>
<td></td>
<td>DNEL</td>
<td>Long term Oral</td>
<td>3.3 mg/kg bw/day</td>
<td>Consumers</td>
<td>Systemic</td>
</tr>
<tr>
<td></td>
<td>DNEL</td>
<td>Long term Inhalation</td>
<td>192 mg/m³</td>
<td>Workers</td>
<td>Systemic</td>
</tr>
<tr>
<td></td>
<td>DNEL</td>
<td>Short term Inhalation</td>
<td>384 mg/m³</td>
<td>Workers</td>
<td>Systemic</td>
</tr>
<tr>
<td></td>
<td>DNEL</td>
<td>Long term Inhalation</td>
<td>192 mg/m³</td>
<td>Workers</td>
<td>Local</td>
</tr>
</tbody>
</table>
SECTION 8: Exposure controls/personal protection

<table>
<thead>
<tr>
<th>DNEL</th>
<th>Compartment</th>
<th>Value</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short term Inhalation</td>
<td>384 mg/m³</td>
<td>Workers</td>
<td></td>
</tr>
<tr>
<td>Long term Dermal</td>
<td>384 mg/kg bw/day</td>
<td>Workers</td>
<td></td>
</tr>
<tr>
<td>Long term Inhalation</td>
<td>56.5 mg/m³</td>
<td>Consumers</td>
<td></td>
</tr>
<tr>
<td>Short term Inhalation</td>
<td>226 mg/m³</td>
<td>Consumers</td>
<td></td>
</tr>
<tr>
<td>Long term Inhalation</td>
<td>56.5 mg/m³</td>
<td>Consumers</td>
<td></td>
</tr>
<tr>
<td>Short term Inhalation</td>
<td>226 mg/m³</td>
<td>Consumers</td>
<td></td>
</tr>
<tr>
<td>Long term Dermal</td>
<td>226 mg/kg bw/day</td>
<td>Consumers</td>
<td></td>
</tr>
<tr>
<td>Long term Oral</td>
<td>8.13 mg/kg bw/day</td>
<td>Consumers</td>
<td></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>4,4’-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane</td>
<td>-</td>
<td>Fresh water</td>
<td>11.5 μg/l</td>
<td>Assessment Factors</td>
</tr>
<tr>
<td>-</td>
<td>Marine water</td>
<td>11.5 μg/l</td>
<td>Assessment Factors</td>
<td></td>
</tr>
<tr>
<td>-</td>
<td>Sewage Treatment Plant</td>
<td>100 mg/l</td>
<td>Assessment Factors</td>
<td></td>
</tr>
<tr>
<td>-</td>
<td>Fresh water sediment</td>
<td>0.229 mg/kg dwt</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>-</td>
<td>Marine water sediment</td>
<td>0.023 mg/kg dwt</td>
<td>Equilibrium Partitioning</td>
<td></td>
</tr>
<tr>
<td>-</td>
<td>Soil</td>
<td>0.099 mg/kg dwt</td>
<td>Sensitivity Distribution</td>
<td></td>
</tr>
<tr>
<td>-</td>
<td>Fresh water</td>
<td>0.68 mg/l</td>
<td>Sensitivity Distribution</td>
<td></td>
</tr>
<tr>
<td>-</td>
<td>Marine water</td>
<td>0.68 mg/l</td>
<td>Sensitivity Distribution</td>
<td></td>
</tr>
<tr>
<td>-</td>
<td>Sewage Treatment Plant</td>
<td>13.61 mg/l</td>
<td>Sensitivity Distribution</td>
<td></td>
</tr>
<tr>
<td>-</td>
<td>Fresh water sediment</td>
<td>16.39 mg/kg dwt</td>
<td>Equilibrium Partitioning</td>
<td></td>
</tr>
<tr>
<td>-</td>
<td>Marine water sediment</td>
<td>16.39 mg/kg dwt</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Toluene</td>
<td>-</td>
<td>Fresh water</td>
<td>0.68 mg/l</td>
<td>Sensitivity Distribution</td>
</tr>
<tr>
<td>-</td>
<td>Marine water</td>
<td>0.68 mg/l</td>
<td>Sensitivity Distribution</td>
<td></td>
</tr>
<tr>
<td>-</td>
<td>Sewage Treatment Plant</td>
<td>13.61 mg/l</td>
<td>Sensitivity Distribution</td>
<td></td>
</tr>
<tr>
<td>-</td>
<td>Fresh water sediment</td>
<td>16.39 mg/kg dwt</td>
<td>Equilibrium Partitioning</td>
<td></td>
</tr>
<tr>
<td>-</td>
<td>Marine water sediment</td>
<td>16.39 mg/kg dwt</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

8.2 Exposure controls

**Appropriate engineering controls**: Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

**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**: Safety glasses with side shields. Use eye protection according to EN 166.

**Skin protection**

**Hand protection**: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. When prolonged or frequently repeated contact may occur, a glove with a protection
**SECTION 8: Exposure controls/personal 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.

**Respirator selection**

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.

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**SECTION 9: Physical and chemical properties**

**9.1 Information on basic physical and chemical properties**

**Appearance**

**Physical state**: Liquid.

**Colour**: Various

**Odour**: Not available.

**Odour threshold**: Not available.

**pH**: Insoluble in water.

**Melting point/freezing point**: May start to solidify at the following temperature: -12.9°C (8.8°F) This is based on data for the following ingredient: 4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane.

**Initial boiling point and boiling range**: >37.78°C

**Flash point**: Closed cup: 80°C

**Evaporation rate**: Not available.

**Material supports combustion**: Yes.

**Flammability (solid, gas)**: Liquid

**Upper/lower flammability or explosive limits**: Not available.

**Relative density**: 1.47

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

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

**Auto-ignition temperature**: Not available.

**Decomposition temperature**: Stable under recommended storage and handling conditions (see Section 7).
SECTION 9: Physical and chemical properties

Viscosity: Kinematic (40°C): >0.21 cm²/s
Viscosity: 100 s (ISO 6mm)

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

Oxidising properties: Product does not present an oxidising 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, sulfur oxides, halogenated compounds, metal oxide/oxides.

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>bis(1,2,2,6,6-pentamethyl-4-piperidyl)</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>3.125</td>
<td>g/kg</td>
</tr>
<tr>
<td>sebacate</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>3.125</td>
<td>g/kg</td>
</tr>
<tr>
<td>methyl 1,2,2,6,6-pentamethyl-4-piperidyl</td>
<td>LC50 Inhalation Vapour</td>
<td>Rat</td>
<td>49 g/m³</td>
<td>4 hours</td>
</tr>
<tr>
<td>sebacate toluene</td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>8.39</td>
<td>g/kg</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>5580</td>
<td>mg/kg</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></td>
<td>Not available.</td>
</tr>
</tbody>
</table>

Irritation/Corrosion

Conclusion/Summary

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

Eyes: There are no data available on the mixture itself.
SECTION 11: Toxicological information

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

Sensitisation

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.

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>toluene</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Narcotic effects</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>toluene</td>
<td>Category 2</td>
<td>Not determined</td>
<td>Not determined</td>
</tr>
</tbody>
</table>

Aspiration hazard

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>toluene</td>
<td>ASPIRATION HAZARD - Category 1</td>
</tr>
</tbody>
</table>

Information on likely routes of exposure
: Not available.

Potential acute health effects

Inhalation
: No known significant effects or critical hazards.

Ingestion
: No known significant effects or critical hazards.

Skin contact
: May cause an allergic skin reaction.

Eye contact
: No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation
: No specific data.

Ingestion
: No specific data.

Skin contact
: Adverse symptoms may include the following:
  irritation
  redness

Eye contact
: No specific data.

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
SECTION 11: Toxicological information

Potential immediate effects: Not available.

Potential delayed effects: Not available.

Potential chronic health effects

General: No known significant effects or critical hazards.

Carcinogenicity: No known significant effects or critical hazards.

Mutagenicity: No known significant effects or critical hazards.

Teratogenicity: Not available.

Developmental effects: No known significant effects or critical hazards.

Fertility effects: No known significant effects or critical hazards.

Conclusion/Summary: 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 4,4′-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate, methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate. 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>4,4′-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane</td>
<td>LC50 11.5 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>toluene</td>
<td>-</td>
<td>-</td>
<td>Readily</td>
</tr>
</tbody>
</table>

12.3 Bioaccumulative potential
**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>toluene</td>
<td>2.73</td>
<td>8.32</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**

- PBT: Not applicable.
- vPvB: Not applicable.

**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.

**Type of packaging**

<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>ADR/RID</th>
<th>ADN</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>14.1 UN number</strong></td>
<td>Not regulated.</td>
<td>9003</td>
<td>Not regulated.</td>
</tr>
<tr>
<td><strong>14.2 UN proper shipping name</strong></td>
<td>-</td>
<td>SUBSTANCES WITH A FLASH-POINT ABOVE 60 °C AND NOT MORE THAN 100 °C (toluene)</td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ADR/RID</th>
<th>ADN</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>14.3 Transport hazard class(es)</strong></td>
<td>-</td>
<td>9</td>
<td>-</td>
</tr>
<tr>
<td><strong>14.4 Packing group</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>14.5 Environmental hazards</strong></td>
<td>No.</td>
<td>Yes.</td>
<td>No.</td>
</tr>
<tr>
<td><strong>Marine pollutant substances</strong></td>
<td>Not applicable.</td>
<td>Not applicable.</td>
<td>Not applicable.</td>
</tr>
</tbody>
</table>

**Additional information**

<table>
<thead>
<tr>
<th>ADR/RID</th>
<th>ADN</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>: None identified.</td>
<td>: The product is only regulated as a dangerous good when transported in tank vessels.</td>
<td>: None identified.</td>
<td>: None identified.</td>
</tr>
</tbody>
</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.

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**

- None of the components are listed.
- Substances of very high concern
  - None of the components are listed.

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

- Not applicable.

**Other EU regulations**

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

Not listed.
SECTION 15: Regulatory information

Seveso Directive
This product is not controlled under the Seveso Directive.

15.2 Chemical safety assessment
No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms
ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
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>Skin Sens. 1, H317</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Aquatic Chronic 3, H412</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>

Full text of abbreviated H statements

| H225  | Highly flammable liquid and vapour.                  |
| H304  | May be fatal if swallowed and enters airways.       |
| H315  | Causes skin irritation.                             |
| H317  | May cause an allergic skin reaction.                |
| H336  | May cause drowsiness or dizziness.                  |
| H361d | Suspected of damaging the unborn child.             |
| 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.|
| H412  | Harmful to aquatic life with long lasting effects.  |

Full text of classifications [CLP/GHS]

| Aquatic Acute 1, H400 | SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1 |
| Aquatic Chronic 1, H410| LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1 |
| Aquatic Chronic 3, H412| LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3 |
| Asp. Tox. 1, H304     | ASPIRATION HAZARD - Category 1                   |
| Flam. Liq. 2, H225    | FLAMMABLE LIQUIDS - Category 2                   |
| Repr. 2, H361d        | REPRODUCTIVE TOXICITY (Unborn child) - Category 2|
| Skin Irrit. 2, H315   | SKIN CORROSION/IRRITATION - Category 2           |
| Skin Sens. 1, H317    | SKIN SENSITISATION - Category 1                  |
| STOT RE 2, H373       | SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE|
|                       | - Category 2                                      |
| STOT SE 3, H336       | SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE |
|                       | (Narcotic effects) - Category 3                  |
SECTION 16: Other information

<table>
<thead>
<tr>
<th>Date of issue/Date of revision</th>
<th>21 December 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of previous issue</td>
<td>8 May 2018</td>
</tr>
<tr>
<td>Prepared by</td>
<td>EHS</td>
</tr>
<tr>
<td>Version</td>
<td>15.04</td>
</tr>
</tbody>
</table>

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