

# SAFETY DATA SHEET

Date of issue/Date of revision

: 28 April 2025

Version

: 1.09



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

### 1.1 Product identifier

**Product name** : SIGMA SAILADVANCE RX REDBROWN

**Product code** : 000001188845

**Other means of identification**

00444779

### 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** : Antifouling products

**Uses advised against** : Product is not intended, labelled or packaged for consumer use.

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

PPG Coatings Belgium BV/SRL

Tweemontstraat 104

B-2100 Deurne

Belgium

Telephone +32-33606311

Fax +32-33606435

**e-mail address of person  
responsible for this SDS** : Product.Stewardship.EMEA@ppg.com

### 1.4 Emergency telephone number

#### Supplier

+31 20 4075210

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

**Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

Flam. Liq. 3, H226

Acute Tox. 4, H302

Eye Dam. 1, H318

Skin Sens. 1, H317

Carc. 2, H351

STOT SE 3, H335

STOT SE 3, H336

Aquatic Acute 1, H400

Aquatic Chronic 1, H410

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.

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

### 2.2 Label elements

Hazard pictograms

:



Signal word

: Danger

Hazard statements

: Flammable liquid and vapour.  
Harmful if swallowed.  
May cause an allergic skin reaction.  
Causes serious eye damage.  
May cause respiratory irritation.  
May cause drowsiness or dizziness.  
Suspected of causing cancer.  
Very toxic to aquatic life with long lasting effects.

### 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. Avoid release to the environment.

Response

: Collect spillage.

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, P273, P391, P403 + P233, P501

Hazardous ingredients

:  dicopper oxide; Hydrocarbons, C9, aromatics < 0.1% cumene; rosin; 4-methylpentan-2-one; zineb (ISO); xylene and Terpeneol

Supplemental label elements

: Repeated exposure may cause skin dryness or cracking.

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

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

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

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SECTION 2: Hazards identification

Other hazards which do not result in classification : Prolonged or repeated contact may dry skin and cause irritation.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

| Product/ingredient name                                                                      | Identifiers                                                                            | % by weight | Classification                                                                                                                                                                 | Specific Conc. Limits, M-factors and ATEs                                                                       | Type    |
|----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------|
|  copper oxide | REACH #:<br>01-2119513794-36<br>EC: 215-270-7<br>CAS: 1317-39-1<br>Index: 029-002-00-X | ≥25 - ≤50   | Acute Tox. 4, H302<br>Acute Tox. 4, H332<br>Eye Dam. 1, H318<br>Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410                                                               | ATE [Oral] = 500 mg/kg<br>ATE [Inhalation (dusts and mists)] = 3.34 mg/l<br>M [Acute] = 100<br>M [Chronic] = 10 | [1] [2] |
| Hydrocarbons, C9, aromatics < 0.1% cumene                                                    | REACH #:<br>01-2119455851-35<br>EC: 918-668-5<br>CAS: 128601-23-0                      | ≥10 - ≤25   | Flam. Liq. 3, H226<br>STOT SE 3, H335<br>STOT SE 3, H336<br>Asp. Tox. 1, H304<br>Aquatic Chronic 2, H411<br>EUH066                                                             | -                                                                                                               | [1]     |
| rosin                                                                                        | REACH #:<br>01-2119480418-32<br>EC: 232-475-7<br>CAS: 8050-09-7<br>Index: 650-015-00-7 | ≥10 - ≤25   | Skin Sens. 1, H317                                                                                                                                                             | -                                                                                                               | [1] [2] |
| zinc oxide                                                                                   | REACH #:<br>01-2119463881-32<br>EC: 215-222-5<br>CAS: 1314-13-2<br>Index: 030-013-00-7 | ≥10 - ≤25   | Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410                                                                                                                               | M [Acute] = 1<br>M [Chronic] = 1                                                                                | [1]     |
| 4-methylpentan-2-one                                                                         | REACH #:<br>01-2119473980-30<br>EC: 203-550-1<br>CAS: 108-10-1<br>Index: 606-004-00-4  | ≥5.0 - ≤10  | Flam. Liq. 2, H225<br>Acute Tox. 4, H332<br>Eye Irrit. 2, H319<br>Carc. 2, H351<br>STOT SE 3, H336<br>EUH066                                                                   | ATE [Inhalation (vapours)] = 11 mg/l                                                                            | [1] [2] |
| zineb (ISO)                                                                                  | EC: 235-180-1<br>CAS: 12122-67-7<br>Index: 006-078-00-2                                | ≥1.0 - ≤5.0 | Skin Sens. 1, H317<br>STOT SE 3, H335                                                                                                                                          | -                                                                                                               | [1]     |
| xylene                                                                                       | REACH #:<br>01-2119488216-32<br>EC: 215-535-7<br>CAS: 1330-20-7                        | ≥1.0 - ≤5.0 | 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 mg/kg<br>ATE [Inhalation (vapours)] = 11 mg/l                                               | [1] [2] |
| 12-hydroxyoctadecanoic                                                                       | REACH #:                                                                               | ≥0.30 -     | Acute Tox. 4, H332                                                                                                                                                             | ATE [Inhalation (dusts                                                                                          | [1] [2] |

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SECTION 3: Composition/information on ingredients

|                                                                                |                                                                                        |             |                                                                                                                              |                                     |     |
|--------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|-------------|------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-----|
| acid, reaction products with 1,3-benzenedimethanamine and hexamethylenediamine | 01-0000017900-73<br>EC: 432-840-2<br>CAS: 220926-97-6<br>Index: 616-201-00-7           | ≤2.4        | STOT RE 2, H373 (lungs) (inhalation)<br>Aquatic Chronic 4, H413                                                              | and mists)] = 3.56 mg/l             |     |
| Terpineol                                                                      | REACH #:<br>01-2119553062-49<br>EC: 232-268-1<br>CAS: 8000-41-7                        | ≥1.0 - ≤4.4 | Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>Skin Sens. 1, H317<br>Asp. Tox. 1, H304<br>Aquatic Chronic 2, H411              | -                                   | [1] |
| copper(II) oxide                                                               | REACH #:<br>01-2119502447-44<br>EC: 215-269-1<br>CAS: 1317-38-0<br>Index: 029-016-00-6 | ≤1.0        | Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410                                                                             | M [Acute] = 100<br>M [Chronic] = 10 | [1] |
| copper                                                                         | REACH #:<br>01-2119480154-42<br>EC: 231-159-6<br>CAS: 7440-50-8                        | <1.0        | Aquatic Acute 1, H400<br>Aquatic Chronic 3, H412<br><br>See Section 16 for the full text of the H statements declared above. | M [Acute] = 1                       | [1] |

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

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

|              |        |      |
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| English (GB) | Europe | 4/20 |
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## SECTION 4: First aid measures

### Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
- Skin contact** : Defatting to the skin. May cause skin dryness and irritation. May cause an allergic skin reaction.
- Ingestion** : Harmful if swallowed. Can cause central nervous system (CNS) depression.

### 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  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness
- 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 dry chemical, CO<sub>2</sub>, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

### 5.2 Special hazards arising from 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 very 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.

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## SECTION 5: Firefighting measures

**Hazardous combustion products** : Decomposition products may include the following materials:  
carbon oxides  
nitrogen oxides  
sulfur oxides  
halogenated compounds  
metal oxide/oxides  
oxides of lead

### 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 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. Shut off all ignition sources. No flares, smoking or flames in hazard area. 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".

### 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. Use spark-proof tools and explosion-proof equipment. 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. Use spark-proof tools and explosion-proof equipment. 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.

| Product/ingredient name | Exposure limit values                                                                                                                                                            |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| copper oxide            | <b>ACGIH TLV (United States, 1/2024) [copper fume]</b><br>TWA 8 hours: 0.2 mg/m³. Form: Fume.                                                                                    |
| rosin                   | <b>ACGIH TLV (United States, 1/2024) [resin acids]</b> Skin sensitiser ,<br>Inhalation sensitiser.<br>TWA 8 hours: 0.001 mg/m³ (as total Resin acids). Form: Inhalable fraction. |
| 4-methylpentan-2-one    | <b>EU OEL (Europe, 1/2022)</b><br>TWA 8 hours: 20 ppm.<br>TWA 8 hours: 83 mg/m³.<br>STEL 15 minutes: 50 ppm.                                                                     |

English (GB)

Europe

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|                               |                |                                |                 |
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SECTION 8: Exposure controls/personal protection

|                                                                                                       |                                                                                                                                                                                                                             |
|-------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| xylene                                                                                                | STEL 15 minutes: 208 mg/m³.<br><b>EU OEL (Europe, 1/2022) [xylene, mixed isomers]</b> Absorbed through skin.<br>TWA 8 hours: 50 ppm.<br>TWA 8 hours: 221 mg/m³.<br>STEL 15 minutes: 100 ppm.<br>STEL 15 minutes: 442 mg/m³. |
| 12-hydroxyoctadecanoic acid, reaction products with 1,3-benzenedimethanamine and hexamethylenediamine | <b>ACGIH TLV (United States)</b><br>TWA: 10 mg/m³. Form: Inhalable particle.<br>TWA: 3 mg/m³ (inhalable dust). Form: Respirable particle.                                                                                   |

**Recommended monitoring procedures** : 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/DMELs

| Product/ingredient name                   | Exposure                                            | Value                                       |
|-------------------------------------------|-----------------------------------------------------|---------------------------------------------|
| dicopper oxide                            | DNEL - Workers - Long term - Inhalation             | <i>Effects: Local</i> 1 mg/m³               |
|                                           | DNEL - Workers - Long term - Inhalation             | <i>Effects: Systemic</i> 1 mg/m³            |
|                                           | DNEL - Workers - Long term - Dermal                 | <i>Effects: Systemic</i> 137 mg/kg bw/day   |
|                                           | DNEL - General population - Long term - Oral        | <i>Effects: Systemic</i> 0.041 mg/kg bw/day |
|                                           | DNEL - General population - Short term - Oral       | <i>Effects: Systemic</i> 0.082 mg/kg bw/day |
|                                           | DNEL - Workers - Long term - Dermal                 | <i>Effects: Systemic</i> 25 mg/kg bw/day    |
|                                           | DNEL - Workers - Long term - Inhalation             | <i>Effects: Systemic</i> 150 mg/m³          |
|                                           | DNEL - General population - Long term - Dermal      | <i>Effects: Systemic</i> 11 mg/kg           |
|                                           | DNEL - General population - Long term - Oral        | <i>Effects: Systemic</i> 11 mg/kg           |
|                                           | DNEL - General population - Long term - Inhalation  | <i>Effects: Systemic</i> 32 mg/m³           |
| Hydrocarbons, C9, aromatics < 0.1% cumene | DNEL - General population - Long term - Dermal      | <i>Effects: Systemic</i> 4.2 mg/kg bw/day   |
|                                           | DNEL - Workers - Long term - Dermal                 | <i>Effects: Systemic</i> 11.8 mg/kg bw/day  |
|                                           | DNEL - General population - Long term - Inhalation  | <i>Effects: Local</i> 14.7 mg/m³            |
|                                           | DNEL - General population - Long term - Inhalation  | <i>Effects: Systemic</i> 14.7 mg/m³         |
|                                           | DNEL - Workers - Long term - Inhalation             | <i>Effects: Local</i> 83 mg/m³              |
|                                           | DNEL - Workers - Long term - Inhalation             | <i>Effects: Systemic</i> 83 mg/m³           |
|                                           | DNEL - General population - Short term - Inhalation | <i>Effects: Local</i> 155.2 mg/m³           |
|                                           | DNEL - General population - Short term - Inhalation | <i>Effects: Systemic</i> 155.2 mg/m³        |
|                                           | DNEL - Workers - Short term - Inhalation            | <i>Effects: Local</i> 208 mg/m³             |
|                                           | DNEL - Workers - Short term - Inhalation            | <i>Effects: Systemic</i> 208 mg/m³          |
| 4-methylpentan-2-one                      | DNEL - General population - Long term - Oral        | <i>Effects: Systemic</i> 4.2 mg/kg bw/day   |
|                                           | DNEL - General population - Long term - Oral        | <i>Effects: Systemic</i> 5 mg/kg bw/day     |
|                                           | DNEL - General population - Long term - Inhalation  | <i>Effects: Local</i> 65.3 mg/m³            |
|                                           | DNEL - General population - Long term - Inhalation  | <i>Effects: Systemic</i> 65.3 mg/m³         |
|                                           | DNEL - General population - Long term - Inhalation  | <i>Effects: Systemic</i> 65.3 mg/m³         |
| xylene                                    | DNEL - General population - Long term - Inhalation  | <i>Effects: Systemic</i> 65.3 mg/m³         |
|                                           | DNEL - General population - Long term - Inhalation  | <i>Effects: Systemic</i> 65.3 mg/m³         |
|                                           | DNEL - General population - Long term - Inhalation  | <i>Effects: Systemic</i> 65.3 mg/m³         |
|                                           | DNEL - General population - Long term - Inhalation  | <i>Effects: Systemic</i> 65.3 mg/m³         |
|                                           | DNEL - General population - Long term - Inhalation  | <i>Effects: Systemic</i> 65.3 mg/m³         |

|                               |                |                                |                 |
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SECTION 8: Exposure controls/personal protection

|                                                                                                       |                                                     |                   |                    |
|-------------------------------------------------------------------------------------------------------|-----------------------------------------------------|-------------------|--------------------|
| 12-hydroxyoctadecanoic acid, reaction products with 1,3-benzenedimethanamine and hexamethylenediamine | Inhalation                                          |                   |                    |
|                                                                                                       | DNEL - General population - Long term - Dermal      | Effects: Systemic | 125 mg/kg bw/day   |
|                                                                                                       | DNEL - Workers - Long term - Dermal                 | Effects: Systemic | 212 mg/kg bw/day   |
|                                                                                                       | DNEL - Workers - Long term - Inhalation             | Effects: Local    | 221 mg/m³          |
|                                                                                                       | DNEL - Workers - Long term - Inhalation             | Effects: Systemic | 221 mg/m³          |
|                                                                                                       | DNEL - General population - Short term - Inhalation | Effects: Local    | 260 mg/m³          |
|                                                                                                       | DNEL - General population - Short term - Inhalation | Effects: Systemic | 260 mg/m³          |
|                                                                                                       | DNEL - Workers - Short term - Inhalation            | Effects: Local    | 442 mg/m³          |
|                                                                                                       | DNEL - Workers - Short term - Inhalation            | Effects: Systemic | 442 mg/m³          |
|                                                                                                       | DNEL - General population - Long term - Inhalation  | Effects: Local    | 82.5 µg/m³         |
| Terpineol                                                                                             | DNEL - Workers - Long term - Inhalation             | Effects: Local    | 332 µg/m³          |
|                                                                                                       | DNEL - General population - Short term - Inhalation | Effects: Local    | 25.7 mg/m³         |
|                                                                                                       | DNEL - Workers - Short term - Inhalation            | Effects: Local    | 51.3 mg/m³         |
|                                                                                                       | DNEL - General population - Long term - Oral        | Effects: Systemic | 2.69 mg/kg bw/day  |
|                                                                                                       | DNEL - General population - Long term - Dermal      | Effects: Systemic | 2.69 mg/kg bw/day  |
|                                                                                                       | DNEL - Workers - Long term - Dermal                 | Effects: Systemic | 6.36 mg/kg bw/day  |
| copper(II) oxide                                                                                      | DNEL - General population - Long term - Inhalation  | Effects: Systemic | 7.96 mg/m³         |
|                                                                                                       | DNEL - Workers - Long term - Inhalation             | Effects: Systemic | 44.8 mg/m³         |
|                                                                                                       | DNEL - Workers - Long term - Inhalation             | Effects: Local    | 1 mg/m³            |
|                                                                                                       | DNEL - Workers - Long term - Inhalation             | Effects: Systemic | 1 mg/m³            |
|                                                                                                       | DNEL - Workers - Long term - Dermal                 | Effects: Systemic | 137 mg/kg bw/day   |
|                                                                                                       | DNEL - General population - Long term - Oral        | Effects: Systemic | 0.041 mg/kg bw/day |
| copper                                                                                                | DNEL - General population - Short term - Oral       | Effects: Systemic | 0.082 mg/kg bw/day |
|                                                                                                       | DNEL - General population - Long term - Dermal      | Effects: Systemic | 137 mg/kg bw/day   |
|                                                                                                       | DNEL - Workers - Long term - Dermal                 | Effects: Systemic | 137 mg/kg bw/day   |
|                                                                                                       | DNEL - General population - Short term - Dermal     | Effects: Systemic | 273 mg/kg bw/day   |
|                                                                                                       | DNEL - Workers - Short term - Dermal                | Effects: Systemic | 273 mg/kg bw/day   |
|                                                                                                       | DNEL - Workers - Short term - Dermal                | Effects: Systemic | 273 mg/kg bw/day   |

PNECs

| Product/ingredient name | Compartment Detail - Method                      | Value           |
|-------------------------|--------------------------------------------------|-----------------|
| copper oxide            | Fresh water                                      | 0.0078 mg/l     |
|                         | Fresh water sediment                             | 87.1 mg/kg dwt  |
|                         | Marine water                                     | 0.0056 mg/l     |
|                         | Marine water sediment                            | 676 mg/kg dwt   |
|                         | Soil                                             | 64.6 mg/kg dwt  |
| rosin                   | Sewage Treatment Plant                           | 0.23 mg/l       |
|                         | Fresh water - Assessment Factors                 | 0.002 mg/l      |
|                         | Marine water - Assessment Factors                | 0 mg/l          |
|                         | Sewage Treatment Plant - Assessment Factors      | 1000 mg/l       |
|                         | Fresh water sediment - Equilibrium Partitioning  | 0.007 mg/kg dwt |
| zinc oxide              | Marine water sediment - Equilibrium Partitioning | 0.001 mg/kg dwt |
|                         | Soil - Equilibrium Partitioning                  | 0 mg/kg dwt     |
|                         | Fresh water - Sensitivity Distribution           | 20.6 µg/l       |
|                         | Marine water - Sensitivity Distribution          | 6.1 µg/l        |
|                         | Fresh water sediment - Sensitivity Distribution  | 117 mg/kg dwt   |
|                         | Sewage Treatment Plant - Assessment Factors      | 52 µg/l         |
|                         | Marine water sediment - Assessment Factors       | 56.5 mg/kg dwt  |
|                         | Soil - Sensitivity Distribution                  | 35.6 mg/kg dwt  |

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## SECTION 8: Exposure controls/personal protection

|                                                                    |                                                  |                 |
|--------------------------------------------------------------------|--------------------------------------------------|-----------------|
| 4-methylpentan-2-one<br><br><br><br><br><br><br><br><br><br>xylene | Fresh water - Assessment Factors                 | 0.6 mg/l        |
|                                                                    | Marine water - Assessment Factors                | 0.06 mg/l       |
|                                                                    | Sewage Treatment Plant - Assessment Factors      | 27.5 mg/l       |
|                                                                    | Fresh water sediment - Equilibrium Partitioning  | 8.27 mg/kg      |
|                                                                    | Marine water sediment - Equilibrium Partitioning | 0.83 mg/kg      |
|                                                                    | Soil - Equilibrium Partitioning                  | 1.3 mg/kg       |
|                                                                    | 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      |

### 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 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

**Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. When prolonged or frequently repeated contact may occur, a glove with a protection class of 6 (breakthrough time greater than 480 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 2 or higher (breakthrough time greater than 30 minutes according to EN 374) is recommended. The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment.

**Gloves** : butyl rubber

**Body protection** : 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. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 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.

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SECTION 8: Exposure controls/personal protection

- Respiratory protection** : Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Wear a respirator conforming to EN140. Filter type: organic vapour (Type A) and particulate filter P3
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

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

9.1 Information on basic physical and chemical properties

Appearance

- Physical state** : Liquid.
- Colour** : Brownish-red.
- Odour** : Aromatic. [Slight]
- Melting point/freezing point** : Not determined.
- Boiling point or initial boiling point and boiling range** : >37.78°C
- Flammability** : Not determined. There are no data available on the mixture itself.
- Lower and upper explosion limit** : Not available.
- Flash point** : Closed cup: 31°C
- Auto-ignition temperature** :

| Ingredient name | °C  | °F    | Method |
|-----------------|-----|-------|--------|
| zineb (ISO)     | 149 | 300.2 |        |

- Decomposition temperature** : Stable under recommended storage and handling conditions (see Section 7).
- pH** : Not applicable. insoluble in water.
- Viscosity** : Dynamic (room temperature): Not available.  
Kinematic (room temperature): Not available.  
Kinematic (40°C): >21 mm²/s
- Viscosity** : > 100 s (ISO 6mm)
- Solubility** :

| Media      | Result      |
|------------|-------------|
| cold water | Not soluble |

- Partition coefficient n-octanol/ water (log Pow)** : Not applicable.

- Vapour pressure** :
- | Ingredient name      | Vapour Pressure at 20°C |     |        | Vapour pressure at 50°C |     |        |
|----------------------|-------------------------|-----|--------|-------------------------|-----|--------|
|                      | mm Hg                   | kPa | Method | mm Hg                   | kPa | Method |
| 4-methylpentan-2-one | 15.75128                | 2.1 |        |                         |     |        |

- Relative density** : 1.67

|                               |                |                                |                 |
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SECTION 9: Physical and chemical properties

|                                                          |                                                                                                                           |
|----------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| <u>Particle characteristics</u>                          |                                                                                                                           |
| Median particle size                                     | : Not applicable.                                                                                                         |
| 9.2 Other information                                    |                                                                                                                           |
| 9.2.1 Information with regard to physical hazard classes |                                                                                                                           |
| 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 oxidizing hazard.                                                                           |
| 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.<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:<br>oxidising agents, strong alkalis, strong acids.                                            |
| 10.6 Hazardous decomposition products   | : Depending on conditions, decomposition products may include the following materials:<br>carbon oxides nitrogen oxides sulfur oxides halogenated compounds metal oxide/oxides |

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. |  |
| Harmful if swallowed.                                                                                                                                               |  |
| Causes serious eye damage.                                                                                                                                          |  |
| May cause an allergic skin reaction.                                                                                                                                |  |
| Suspected of causing cancer.                                                                                                                                        |  |
| May cause respiratory irritation.                                                                                                                                   |  |
| May cause drowsiness or dizziness.                                                                                                                                  |  |

| <u>Acute toxicity</u>                                                                             |                                                                                                                                             |                     |
|---------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| Product/ingredient name                                                                           | Result                                                                                                                                      | Dose / Exposure     |
|  dicopper oxide | Rat - Oral - LD50                                                                                                                           | 500 mg/kg           |
|                                                                                                   | Rat - Dermal - LD50                                                                                                                         | >2000 mg/kg         |
|                                                                                                   | Rat - Inhalation - LC50 Dusts and mists                                                                                                     | 3.34 mg/l [4 hours] |
| Hydrocarbons, C9, aromatics < 0.1% cumene                                                         | Rat - Oral - LD50                                                                                                                           | 8400 mg/kg          |
|                                                                                                   | <i>Toxic effects:</i> Behavioral - Somnolence (general depressed activity) Behavioral - Tremor Lung, Thorax, or Respiration - Other changes |                     |
| rosin                                                                                             | Rabbit - Male, Female - Dermal - LD50                                                                                                       | >2000 mg/kg         |
|                                                                                                   | Rat - Oral - LD50                                                                                                                           | 7600 mg/kg          |
|                                                                                                   | Rat - Dermal - LD50                                                                                                                         | >2000 mg/kg         |
| zinc oxide                                                                                        | Rat - Oral - LD50                                                                                                                           | >5000 mg/kg         |
| English (GB)                                                                                      |                                                                                                                                             | Europe 12/20        |

|                               |                |                                |                 |
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SECTION 11: Toxicological information

|                                                                                                       |                                                                                                                                                 |                                                                                       |
|-------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| 4-methylpentan-2-one                                                                                  | Rat - Dermal - LD50<br>Rat - Inhalation - LC50 Dusts and mists<br>Rat - Oral - LD50<br>Rabbit - Dermal - LD50<br>Rat - Inhalation - LC50 Vapour | >2000 mg/kg<br>>5700 mg/m³ [4 hours]<br>2.08 g/kg<br>>5000 mg/kg<br>11 mg/l [4 hours] |
| zineb (ISO)                                                                                           | Rat - Oral - LD50                                                                                                                               | >2000 mg/kg                                                                           |
| xylene                                                                                                | Rat - Oral - LD50<br>Rabbit - Dermal - LD50<br>Rat - Oral - LD50                                                                                | 4.3 g/kg<br>1.7 g/kg<br>>2000 mg/kg                                                   |
| 12-hydroxyoctadecanoic acid, reaction products with 1,3-benzenedimethanamine and hexamethylenediamine | Rat - Oral - LD50                                                                                                                               | >2000 mg/kg                                                                           |
| Terpineol                                                                                             | Rat - Dermal - LD50<br>Rat - Inhalation - LC50 Dusts and mists<br>Rat - Oral - LD50                                                             | >2000 mg/kg<br>3.56 mg/l [4 hours]<br>4300 mg/kg                                      |
| copper(II) oxide                                                                                      | Rat - Oral - LD50                                                                                                                               | >2000 mg/kg                                                                           |
| copper                                                                                                | Rat - Inhalation - LC50 Dusts and mists                                                                                                         | >5.11 mg/l [4 hours]                                                                  |

Acute toxicity estimates

| Route                        | ATE value       |
|------------------------------|-----------------|
| Oral                         | 1787.15 mg/kg   |
| Dermal                       | 133987.51 mg/kg |
| Inhalation (vapours)         | 111.22 mg/l     |
| Inhalation (dusts and mists) | 11.53 mg/l      |

Conclusion/Summary : Harmful if swallowed.

Irritation/Corrosion

| Product/ingredient name                                                                   | Result                                                                                                                |
|-------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
|  xylene | Rabbit - Skin - Moderate irritant<br>Amount/concentration applied: 500 mg<br>Duration of treatment/exposure: 24 hours |
| Terpineol                                                                                 | Rabbit - Skin - Irritant                                                                                              |

Conclusion/Summary

Skin : Based on available data, the classification criteria are not met.  
Eyes : Causes serious eye damage.  
Respiratory : Based on available data, the classification criteria are not met.

Respiratory or skin sensitization

| Product/ingredient name                                                                        | Test                          | Result              |
|------------------------------------------------------------------------------------------------|-------------------------------|---------------------|
|  zineb (ISO) | Guinea pig - skin             | Result: Sensitising |
| Terpineol                                                                                      | Guinea pig - skin<br>OECD 406 | Result: Sensitising |

Conclusion/Summary

Skin : May cause an allergic skin reaction.  
Respiratory : Based on available data, the classification criteria are not met.

Mutagenicity

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

Carcinogenicity

Suspected of causing cancer.

Reproductive toxicity

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

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SECTION 11: Toxicological information

Specific target organ toxicity (single exposure)

| Product/ingredient name                   | Category   | Route of exposure | Target organs                |
|-------------------------------------------|------------|-------------------|------------------------------|
| Hydrocarbons, C9, aromatics < 0.1% cumene | Category 3 | -                 | Respiratory tract irritation |
| -                                         | Category 3 | -                 | Narcotic effects             |
| 4-methylpentan-2-one                      | Category 3 | -                 | Narcotic effects             |
| zineb (ISO)                               | Category 3 | -                 | Respiratory tract irritation |
| xylene                                    | Category 3 | -                 | Respiratory tract irritation |

Conclusion/Summary :  
May cause respiratory irritation.  
May cause drowsiness or dizziness.

Specific target organ toxicity (repeated exposure)

| Product/ingredient name                                                                              | Category   | Route of exposure | Target organs |
|------------------------------------------------------------------------------------------------------|------------|-------------------|---------------|
| 2-hydroxyoctadecanoic acid, reaction products with 1,3-benzenedimethanamine and hexamethylenediamine | Category 2 | inhalation        | lungs         |

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

Aspiration hazard

| Product/ingredient name                   | Result                         |
|-------------------------------------------|--------------------------------|
| Hydrocarbons, C9, aromatics < 0.1% cumene | ASPIRATION HAZARD - Category 1 |
| xylene                                    | ASPIRATION HAZARD - Category 1 |
| Terpineol                                 | ASPIRATION HAZARD - Category 1 |

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

Information on likely routes of exposure : Not available.

Potential acute health effects

- Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
- Ingestion : Harmful if swallowed. Can cause central nervous system (CNS) depression.
- Skin contact : Defatting to the skin. May cause skin dryness and irritation. 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  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness
- Ingestion : Adverse symptoms may include the following:  
stomach pains

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SECTION 11: Toxicological information

|              |                                                                                                                               |
|--------------|-------------------------------------------------------------------------------------------------------------------------------|
| 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 effects as well as chronic effects from short and long-term exposure

|                             |                                                     |
|-----------------------------|-----------------------------------------------------|
| Short term exposure         |                                                     |
| Potential immediate effects | : No known significant effects or critical hazards. |
| Potential delayed effects   | : No known significant effects or critical hazards. |
| Long term exposure          |                                                     |
| Potential immediate effects | : No known significant effects or critical hazards. |
| Potential delayed effects   | : No known significant effects or critical hazards. |

|                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Potential chronic health effects |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| General                          | : 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.                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Reproductive toxicity            | : No known significant effects or critical hazards.                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Other information                | : Prolonged or repeated contact may dry skin and cause irritation. Sanding and grinding dusts may be harmful if inhaled. Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Inhalation of vapour/aerosol concentrations above the recommended exposure limits causes headaches, drowsiness and nausea and may lead to unconsciousness or death. Avoid contact with skin and clothing. |

|                                                                                                                                                                                                              |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 11.2 Information on other hazards                                                                                                                                                                            |  |
| 11.2.1 Endocrine disrupting properties                                                                                                                                                                       |  |
| The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008. |  |
| 11.2.2 Other information                                                                                                                                                                                     |  |
| Not available.                                                                                                                                                                                               |  |

SECTION 12: Ecological information

|                                                                                                                                                                                                        |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| There are no data available on the mixture itself.<br>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                                                                                                                                                                                          |  |

|                               |                |                                |                 |
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SECTION 12: Ecological information

| Product/ingredient name                                                                                                                                                                                                    | Result                       | Species                                                     | Dose / Exposure       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|-------------------------------------------------------------|-----------------------|
| copper oxide<br>Hydrocarbons, C9, aromatics < 0.1% cumene<br>zinc oxide<br><br>4-methylpentan-2-one<br>12-hydroxyoctadecanoic acid, reaction products with 1,3-benzenedimethanamine and hexamethylenediamine<br><br>copper | LC50                         | Fish                                                        | 0.003 mg/l [96 hours] |
|                                                                                                                                                                                                                            | LC50                         | Fish                                                        | 9.2 mg/l [96 hours]   |
|                                                                                                                                                                                                                            | Acute - EC50 - Fresh water   | Daphnia - Water flea - <i>Daphnia magna</i> - Neonate       | 0.481 mg/l [48 hours] |
|                                                                                                                                                                                                                            | Acute - EC50                 | Algae                                                       | 0.17 mg/l [72 hours]  |
|                                                                                                                                                                                                                            | Chronic - NOEC - Fresh water | Algae                                                       | 0.017 mg/l [72 hours] |
|                                                                                                                                                                                                                            | Acute - LC50                 | Fish                                                        | >179 mg/l [96 hours]  |
|                                                                                                                                                                                                                            | Acute - LC50                 | Fish - <i>Oncorhynchus mykiss</i> (rainbow trout)           | >100 mg/l [96 hours]  |
|                                                                                                                                                                                                                            | Acute - EC50                 | Daphnia - <i>Daphnia magna</i> (Water flea)                 | >100 mg/l [48 hours]  |
|                                                                                                                                                                                                                            | Acute - EC50                 | Algae - <i>Pseudokirchneriella subcapitata</i> (microalgae) | >100 mg/l [72 hours]  |
|                                                                                                                                                                                                                            | Chronic - NOEC               | Daphnia - <i>Daphnia magna</i> (Water flea)                 | ≥50 mg/l [21 days]    |
|                                                                                                                                                                                                                            | Chronic - NOEC               | Algae - <i>Pseudokirchneriella subcapitata</i>              | 100 mg/l [72 hours]   |
|                                                                                                                                                                                                                            | Acute - LC50                 | Fish                                                        | 810 ppb [96 hours]    |
|                                                                                                                                                                                                                            | Chronic - EC10               | Daphnia - Water flea - <i>Daphnia magna</i> - Neonate       | 8.1 µg/l [21 days]    |

Conclusion/Summary : Very toxic to aquatic life with long lasting effects.

12.2 Persistence and degradability

| Product/ingredient name                                                                                                                                                    | Test                                                             | Result                                                | Dose / Inoculum |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|-------------------------------------------------------|-----------------|
| Hydrocarbons, C9, aromatics < 0.1% cumene<br>4-methylpentan-2-one<br>12-hydroxyoctadecanoic acid, reaction products with 1,3-benzenedimethanamine and hexamethylenediamine | -                                                                | 78% [28 days]                                         |                 |
|                                                                                                                                                                            | OECD 301F<br>OECD [ Ready Biodegradability - Closed Bottle Test] | 83% [28 days] - Readily<br>9% [29 days] - Not readily |                 |

| Product/ingredient name                                                     | Aquatic half-life | Photolysis | Biodegradability |
|-----------------------------------------------------------------------------|-------------------|------------|------------------|
| Hydrocarbons, C9, aromatics < 0.1% cumene<br>4-methylpentan-2-one<br>xylene | -                 | -          | Readily          |
|                                                                             | -                 | -          | Readily          |
|                                                                             | -                 | -          | Readily          |

12.3 Bioaccumulative potential

|                               |                |                                |                 |
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SECTION 12: Ecological information

| Product/ingredient name                                                                               | LogP <sub>ow</sub> | BCF         | Potential |
|-------------------------------------------------------------------------------------------------------|--------------------|-------------|-----------|
| Hydrocarbons, C9, aromatics < 0.1% cumene                                                             | 3.7 to 4.5         | 10 to 2500  | High      |
| rosin                                                                                                 | 1.9 to 7.7         | -           | High      |
| 4-methylpentan-2-one                                                                                  | 1.9                | -           | Low       |
| zineb (ISO)                                                                                           | 1.3                | -           | Low       |
| xylene                                                                                                | 3.12               | 7.4 to 18.5 | Low       |
| 12-hydroxyoctadecanoic acid, reaction products with 1,3-benzenedimethanamine and hexamethylenediamine | >6                 | -           | High      |
| Terpineol                                                                                             | 2.6                | -           | Low       |

12.4 Mobility in soil  
Soil/water partition coefficient

| Product/ingredient name | logK <sub>oc</sub> | K <sub>oc</sub> |
|-------------------------|--------------------|-----------------|
| 4-methylpentan-2-one    | 1.61               | 40.9047         |
| zineb (ISO)             | 2.71               | 508.346         |

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

The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

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. 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                | :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| European waste catalogue (EWC) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

| Waste code | Waste designation                                                                 |
|------------|-----------------------------------------------------------------------------------|
| 08 01 11*  | waste paint and varnish containing organic solvents or other hazardous substances |

Packaging

|                               |                |                                |                 |
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SECTION 13: Disposal considerations

|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 | : 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. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. |

SECTION 14: Transport information

|                                 |                 |                 |                  |                                                                    |
|---------------------------------|-----------------|-----------------|------------------|--------------------------------------------------------------------|
|                                 | ADR/RID         | ADN             | IMDG             | IATA                                                               |
| 14.1 UN number or ID number     | UN1263          | UN1263          | UN1263           | UN1263                                                             |
| 14.2 UN proper shipping name    | PAINT           | PAINT           | PAINT            | PAINT                                                              |
| 14.3 Transport hazard class(es) | 3               | 3               | 3                | 3                                                                  |
| 14.4 Packing group              | III             | III             | III              | III                                                                |
| 14.5 Environmental hazards      | Yes.            | Yes.            | Yes.             | Yes. The environmentally hazardous substance mark is not required. |
| Marine pollutant substances     | Not applicable. | Not applicable. | (dicopper oxide) | 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 | : (D/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. |

|                                   |                                                                                                                                                                                                                     |
|-----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 14.6 Special precautions for user | : <b>Transport within user's premises:</b> always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage. |
|-----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                              |                   |
|--------------------------------------------------------------|-------------------|
| 14.7 Maritime transport in bulk according to IMO instruments | : Not applicable. |
|--------------------------------------------------------------|-------------------|

|                               |                |                                |                 |
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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 name       | Entry Number ( REACH ) |
|-------------------------------|------------------------|
| SIGMA SAILADVANCE RX REDBROWN | 3                      |

Labelling : Not applicable.

Explosive precursors : Not applicable.

Ozone depleting substances (EU 2024/590)

Not listed.

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

| Category                                                                                      |
|-----------------------------------------------------------------------------------------------|
|  P5c<br>E1 |

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

Full text of abbreviated H statements

|                               |                |                                |                 |
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SECTION 16: Other information

|        |                                                                    |
|--------|--------------------------------------------------------------------|
| H225   | Highly flammable liquid and vapour.                                |
| H226   | Flammable liquid and vapour.                                       |
| H302   | Harmful if swallowed.                                              |
| H304   | May be fatal if swallowed and enters airways.                      |
| H312   | Harmful in contact with skin.                                      |
| H315   | Causes skin irritation.                                            |
| H317   | May cause an allergic skin reaction.                               |
| H318   | Causes serious eye damage.                                         |
| H319   | Causes serious eye irritation.                                     |
| H332   | Harmful if inhaled.                                                |
| H335   | May cause respiratory irritation.                                  |
| H336   | May cause drowsiness or dizziness.                                 |
| H351   | Suspected of causing cancer.                                       |
| 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.                 |
| H413   | May cause long lasting harmful effects to aquatic life.            |
| EUH066 | Repeated exposure may cause skin dryness or cracking.              |

Full text of classifications [CLP/GHS]

|                   |                                                                 |
|-------------------|-----------------------------------------------------------------|
| Acute Tox. 4      | ACUTE TOXICITY - Category 4                                     |
| Aquatic Acute 1   | SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1                  |
| Aquatic Chronic 1 | LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1                 |
| Aquatic Chronic 2 | LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2                 |
| Aquatic Chronic 3 | LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3                 |
| Aquatic Chronic 4 | LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 4                 |
| Asp. Tox. 1       | ASPIRATION HAZARD - Category 1                                  |
| Carc. 2           | CARCINOGENICITY - Category 2                                    |
| Eye Dam. 1        | SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1                  |
| Eye Irrit. 2      | SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2                  |
| Flam. Liq. 2      | FLAMMABLE LIQUIDS - Category 2                                  |
| Flam. Liq. 3      | FLAMMABLE LIQUIDS - Category 3                                  |
| Skin Irrit. 2     | SKIN CORROSION/IRRITATION - Category 2                          |
| Skin Sens. 1      | SKIN SENSITISATION - Category 1                                 |
| STOT RE 2         | SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2 |
| STOT SE 3         | SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3   |

History

|                                 |                    |
|---------------------------------|--------------------|
| Date of issue/ Date of revision | : 28 April 2025    |
| Date of previous issue          | : 16 December 2024 |
| Prepared by                     | : EHS              |
| Version                         | : 1.09             |

Disclaimer

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