

# SAFETY DATA SHEET



Date of issue 25 October 2023

Version 2

## Section 1. Identification

**Chemical name** : SIGMA SAILADVANCE DX III-3 REDBROWN

**GHS product identifier** : 高性能无锡自抛光防污漆 DX III-3 红棕色

**Code** : 00468618

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

**Product use** : Antifouling products  
Professional applications, Used by spraying.

**Supplier's details** : PPG Industries International Inc. Taiwan Branch.  
No.209, Hong Tzuenn Rd Ping Chen City, Taoyuan County, Taiwan  
Tel: 886 3 3663922  
886 3 3751639 (Automotive OEM Coatings Products).  
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**Emergency telephone number** : North: +886-3-3663922  
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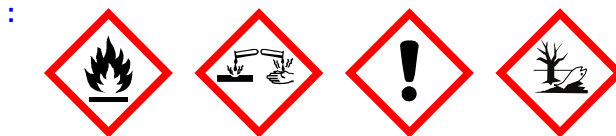
## Section 2. Hazards identification

**Classification of the substance or mixture** : FLAMMABLE LIQUIDS - Category 3  
ACUTE TOXICITY (oral) - Category 4  
ACUTE TOXICITY (dermal) - Category 5  
ACUTE TOXICITY (inhalation) - Category 4  
SKIN CORROSION/IRRITATION - Category 2  
SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1  
SKIN SENSITISATION - Category 1  
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3  
AQUATIC TOXICITY (ACUTE) - Category 1  
AQUATIC TOXICITY (CHRONIC) - Category 1  
Percentage of the mixture consisting of ingredient(s) of unknown acute oral toxicity: 8.8%  
Percentage of the mixture consisting of ingredient(s) of unknown acute dermal toxicity: 30.2%  
Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 22%  
Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 25.3%

### GHS label elements

## Section 2. Hazards identification

### Hazard pictograms



### Signal word

: Danger

### Hazard statements

: Flammable liquid and vapour.  
 Harmful if swallowed or if inhaled.  
 May be harmful in contact with skin.  
 Causes skin irritation.  
 May cause an allergic skin reaction.  
 Causes serious eye damage.  
 May cause respiratory irritation.  
 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. Use explosion-proof electrical, ventilating or lighting equipment. Use non-sparking tools. Take action to prevent static discharges. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Avoid breathing vapour. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.

#### Response

: Collect spillage. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell. IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell. Rinse mouth. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF ON SKIN: Call a POISON CENTER or doctor if you feel unwell. Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.

#### Storage

: Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool.

#### Disposal

: Dispose of contents and container in accordance with all local, regional, national and international regulations.

### Other hazards which do not result in classification

: Prolonged or repeated contact may dry skin and cause irritation.

## Section 3. Composition/information on ingredients

### Substance/mixture

: Mixture

| Hazardous ingredients                           | Concentration % | CAS number |
|---|-----------------|------------|
| copper oxide                                    | 25 - <50        | 1317-39-1  |
| xylene  | 10 - <20        | 1330-20-7  |
| zinc oxide                                      | 10 - <20        | 1314-13-2  |
| zineb (ISO)                                     | 5 - <10         | 12122-67-7 |
| Talc , not containing asbestiform fibres        | 3 - <5          | 14807-96-6 |
| ethylbenzene                                    | 3 - <5          | 100-41-4   |
| bis(1-hydroxy-1H-pyridine-2-thionato-O,S)copper | 0.3 - <1        | 14915-37-8 |
| copper oxide                                    | 0.3 - <1        | 1317-38-0  |

### Section 3. Composition/information on ingredients

| 危險成分           | 浓度 %     | CAS号码      |
|----------------|----------|------------|
| 氯化亚铜           | 25 - <50 | 1317-39-1  |
| 二甲苯            | 10 - <20 | 1330-20-7  |
| 氧化锌            | 10 - <20 | 1314-13-2  |
| 亚乙基双二硫代氨基甲酸锌   | 5 - <10  | 12122-67-7 |
| 滑石             | 3 - <5   | 14807-96-6 |
| 乙苯             | 3 - <5   | 100-41-4   |
| 双(2-巯基吡啶氧化物)铜盐 | 0.3 - <1 | 14915-37-8 |
| 氧化铜            | 0.3 - <1 | 1317-38-0  |

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 and hence require reporting in this section.

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

### Section 4. First aid measures

#### Description of necessary first aid measures

- 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.
- Ingestion** : If swallowed, seek medical advice immediately and show the container or label. Keep person warm and at rest. Do NOT induce vomiting.
- 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.
- 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.

#### Most important symptoms/effects, acute and delayed

##### Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : Harmful if inhaled. May cause respiratory irritation.
- Skin contact** : May be harmful in contact with skin. Causes skin irritation. Defatting to the skin. May cause an allergic skin reaction.
- Ingestion** : Harmful if swallowed.

##### 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

## Section 4. First aid measures

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

### Indication of immediate medical attention and special treatment needed, if necessary

- 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.
- 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.

See toxicological information (Section 11)

## Section 5. Firefighting measures

### Extinguishing media

- Suitable** : Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.
- Not suitable** : Do not use water jet.
- Specific hazards arising from the chemical** : 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.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon oxides  
nitrogen oxides  
sulfur oxides  
metal oxide/oxides  
oxides of lead
- Special protective actions 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.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

: 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 spilled 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.

### Environmental precautions

: Avoid dispersal of spilled 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.

### Methods and material for containment and cleaning up

#### 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 (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

#### 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.

## Section 7. Handling and storage

### Precautions for safe handling

: Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

### Conditions for safe storage, including any incompatibilities

: Store between the following temperatures: 0 to 35°C (32 to 95°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidising materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

| Ingredient name   | Exposure limits   |
|---|---|
| copper oxide  | <p><b>TW Ministry of Labor, labor permissible workplace exposure standards, allowable concentration (Taiwan, 3/2018). [Copper fume]</b></p> <p>STEL: 0.6 mg/m<sup>3</sup> 15 minutes. Form: Fume<br/>TWA: 0.2 mg/m<sup>3</sup> 8 hours. Form: Fume</p>  |
| xylene  | <p><b>TW Ministry of Labor, labor permissible workplace exposure standards, allowable concentration (Taiwan, 3/2018). [xylenes (o-, m-, p-isomer)]</b></p> <p>STEL: 542.5 mg/m<sup>3</sup> 15 minutes.<br/>STEL: 125 ppm 15 minutes.<br/>TWA: 434 mg/m<sup>3</sup> 8 hours.<br/>TWA: 100 ppm 8 hours.</p> |
| zinc oxide  | <p><b>TW Ministry of Labor, labor permissible workplace exposure standards, allowable concentration (Taiwan, 3/2018).</b></p> <p>STEL: 10 mg/m<sup>3</sup> 15 minutes. Form: Fume<br/>TWA: 5 mg/m<sup>3</sup> 8 hours. Form: Fume</p>   |
| Talc (Mg <sub>3</sub> H <sub>2</sub> (SiO <sub>3</sub> ) <sub>4</sub> ) | <p><b>TW Ministry of Labor, labor permissible workplace exposure standards, allowable concentration (Taiwan, 3/2018).</b></p> <p>STEL: 4 mg/m<sup>3</sup> 15 minutes.<br/>TWA: 2 mg/m<sup>3</sup> 8 hours.</p>  |
| ethylbenzene  | <p><b>TW Ministry of Labor, labor permissible workplace exposure standards, allowable concentration (Taiwan, 3/2018).</b></p> <p>STEL: 542.5 mg/m<sup>3</sup> 15 minutes.<br/>STEL: 125 ppm 15 minutes.<br/>TWA: 434 mg/m<sup>3</sup> 8 hours.<br/>TWA: 100 ppm 8 hours.</p>                              |
| copper oxide  | <p><b>TW Ministry of Labor, labor permissible workplace exposure standards, allowable concentration (Taiwan, 3/2018). [Copper fume]</b></p> <p>STEL: 0.6 mg/m<sup>3</sup> 15 minutes. Form: Fume<br/>TWA: 0.2 mg/m<sup>3</sup> 8 hours. Form: Fume</p>  |

**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

## 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.
- 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.
- Gloves** : butyl rubber
- 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.
- Eye protection** : Chemical splash goggles and face shield.
- 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.

## Section 9. Physical and chemical properties

### Appearance

- Physical state** : Liquid.
- Colour** : Not available.
- Odour** : Characteristic.
- Odour threshold** : Not available.
- pH** : Not applicable.
- Melting point** : Not available.
- Boiling point** : >37.78°C (>100°F)
- Flash point** : Closed cup: 25°C (77°F)
- Flammability (solid, gas)** : Not available.
- Burning time** : Not applicable.
- Burning rate** : Not applicable.
- Decomposition temperature** : Not available.
- Evaporation rate** : Not available.
- Lower and upper explosive (flammable) limits** : Not available.
- Vapour pressure** : Not available.
- Vapour density** : Not available.

## Section 9. Physical and chemical properties

Relative density : 1.79

Solubility(ies) :

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

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

Auto-ignition temperature : Not available.

Viscosity : Kinematic (40°C): >21 mm<sup>2</sup>/s

## Section 10. Stability and reactivity

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : When exposed to high temperatures may produce hazardous decomposition products.

Incompatible materials : Keep away from the following materials to prevent strong exothermic reactions: oxidising agents, strong alkalis, strong acids.

Hazardous decomposition products : Depending on conditions, decomposition products may include the following materials: carbon oxides nitrogen oxides sulfur oxides metal oxide/oxides

Hazardous polymerisation : Under normal conditions of storage and use, hazardous polymerisation will not occur.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

| Product/ingredient name                         | Result                          | Species                | Dose                    | Exposure  |
|---|---------------------------------|------------------------|-------------------------|-----------|
| copper oxide                                    | LC50 Inhalation Dusts and mists | Rat                    | 3.34 mg/l               | 4 hours   |
|   | LD50 Dermal                     | Rat                    | >2000 mg/kg             | -         |
|   | LD50 Oral                       | Rat                    | 500 mg/kg               | -         |
| xylene  | LD50 Dermal                     | Rabbit                 | 1.7 g/kg                | -         |
|   | LD50 Oral                       | Rat                    | 4.3 g/kg                | -         |
| zinc oxide                                      | LC50 Inhalation Dusts and mists | Rat                    | >5700 mg/m <sup>3</sup> | 4 hours   |
|   | LD50 Dermal                     | Rat                    | >2000 mg/kg             | -         |
|   | LD50 Oral                       | Rat                    | >5000 mg/kg             | -         |
| zineb (ISO)                                     | LD50 Oral                       | Rat                    | >2000 mg/kg             | -         |
|   | ethylbenzene                    | LC50 Inhalation Vapour | Rat                     | 17.8 mg/l |
| LD50 Dermal                                     |                                 | Rabbit                 | 17.8 g/kg               | -         |
| LD50 Oral                                       |                                 | Rat                    | 3.5 g/kg                | -         |
| bis(1-hydroxy-1H-pyridine-2-thionato-O,S)copper | LC50 Inhalation Dusts and mists | Rat                    | 70 mg/m <sup>3</sup>    | 4 hours   |
|   | LD50 Oral                       | Rat                    | 1075 mg/kg              | -         |
| copper oxide                                    | LD50 Oral                       | Rat                    | >2000 mg/kg             | -         |

#### Irritation/Corrosion



**Section 11. Toxicological information**

| Product/ingredient name | Result                   | Species | Score | Exposure        | Observation |
|-------------------------|--------------------------|---------|-------|-----------------|-------------|
| xylene                  | Skin - Moderate irritant | Rabbit  | -     | 24 hours 500 mg | -           |

**Sensitisation**

| Product/ingredient name | Route of exposure | Species    | Result      |
|-------------------------|-------------------|------------|-------------|
| zineb (ISO)             | skin              | Guinea pig | Sensitising |

**Mutagenicity**

Not available.

**Carcinogenicity**

Not available.

**Reproductive toxicity**

Not available.

**Teratogenicity**

Not available.

**Specific target organ toxicity (single exposure)**

| Name  | Category   | Route of exposure | Target organs                |
|---|------------|-------------------|------------------------------|
| xylene  | Category 3 | -                 | Respiratory tract irritation |
| zineb (ISO)   | Category 3 | -                 | Respiratory tract irritation |
| Talc (Mg <sub>3</sub> H <sub>2</sub> (SiO <sub>3</sub> ) <sub>4</sub> ) | Category 3 | -                 | Respiratory tract irritation |
|   | Category 3 |                   | Narcotic effects             |

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

| Name         | Category   | Route of exposure | Target organs  |
|--------------|------------|-------------------|----------------|
| ethylbenzene | Category 2 | -                 | hearing organs |

**Aspiration hazard**

| Name                   | Result   |
|------------------------|--|
| xylene<br>ethylbenzene | ASPIRATION HAZARD - Category 1<br>ASPIRATION HAZARD - Category 1 |

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

**Potential acute health effects**

## Section 11. Toxicological information

- Inhalation** : Harmful if inhaled. May cause respiratory irritation.
- Ingestion** : Harmful if swallowed.
- Skin contact** : May be harmful in contact with skin. Causes skin irritation. Defatting to the skin. May cause an allergic skin reaction.
- Eye contact** : Causes serious eye damage.

### Symptoms related to the physical, chemical and toxicological characteristics

- Eyes** : Adverse symptoms may include the following:  
pain  
watering  
redness
- Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing
- Skin** : Adverse symptoms may include the following:  
pain or irritation  
redness  
dryness  
cracking  
blistering may occur
- Ingestion** : Adverse symptoms may include the following:  
stomach pains

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

#### Short term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Potential chronic health effects

Not available.

- 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** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Reproductive toxicity** : No known significant effects or critical hazards.
- Inhalation** : No known significant effects or critical hazards.
- Ingestion** : No known significant effects or critical hazards.

## Section 11. Toxicological information

- Skin contact** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
- Eye contact** : No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

| Product/ingredient name   | Oral (mg/kg) | Dermal (mg/kg) | Inhalation (gases) (ppm) | Inhalation (vapours) (mg/l) | Inhalation (dusts and mists) (mg/l) |
|---|--------------|----------------|--------------------------|-----------------------------|-------------------------------------|
| SIGMA SAILADVANCE DX III-3 REDBROWN                                     | 1510.5       | 2470.0         | N/A                      | 36.0                        | 3.3                                 |
| dicopper oxide  | 500          | 2500           | N/A                      | N/A                         | 3.34                                |
| xylene  | 4300         | 1700           | N/A                      | 11                          | 1.5                                 |
| zinc oxide  | N/A          | 2500           | N/A                      | N/A                         | N/A                                 |
| zineb (ISO)   | 2500         | N/A            | N/A                      | N/A                         | N/A                                 |
| Talc (Mg <sub>3</sub> H <sub>2</sub> (SiO <sub>3</sub> ) <sub>4</sub> ) | N/A          | N/A            | N/A                      | 11                          | N/A                                 |
| ethylbenzene  | 3500         | 17800          | N/A                      | 17.8                        | 1.5                                 |
| bis(1-hydroxy-1H-pyridine-2-thionato-O,S)copper                         | 1075         | N/A            | N/A                      | 0.5                         | 0.07                                |
| copper oxide  | 2500         | N/A            | N/A                      | N/A                         | N/A                                 |

#### 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.

## Section 12. Ecological information

### Toxicity

| Product/ingredient name | Result                              | Species                                  | Exposure |
|-------------------------|-------------------------------------|--|----------|
| dicopper oxide          | LC50 0.003 mg/l                     | Fish                                     | 96 hours |
| zinc oxide              | Acute EC50 0.17 mg/l                | Algae                                    | 72 hours |
|                         | Acute EC50 0.481 mg/l Fresh water   | Daphnia - <i>Daphnia magna</i> - Neonate | 48 hours |
| ethylbenzene            | Chronic NOEC 0.017 mg/l Fresh water | Algae                                    | 72 hours |
|                         | Acute EC50 1.8 mg/l Fresh water     | Daphnia                                  | 48 hours |
|                         | Chronic NOEC 1 mg/l Fresh water     | Daphnia - <i>Ceriodaphnia dubia</i>      | -        |

### Persistence and degradability

| Product/ingredient name | Test | Result                   | Dose | Inoculum |
|-------------------------|------|--------------------------|------|----------|
| ethylbenzene            | -    | 79 % - Readily - 10 days | -    | -        |

## Section 12. Ecological information

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|-------------------------|-------------------|------------|------------------|
| xylene                  | -                 | -          | Readily          |
| ethylbenzene            | -                 | -          | Readily          |

### Bioaccumulative potential

| Product/ingredient name | LogP <sub>ow</sub> | BCF         | Potential |
|-------------------------|--------------------|-------------|-----------|
| xylene                  | 3.12               | 7.4 to 18.5 | Low       |
| zineb (ISO)             | 1.3                | -           | Low       |
| ethylbenzene            | 3.6                | 79.43       | Low       |

### Mobility in soil

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

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

## Section 13. Disposal considerations

**Disposal methods** : 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. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. 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

|                            | UN     | IMDG   | IATA   |
|----------------------------|--------|--------|--------|
| UN number                  | UN1263 | UN1263 | UN1263 |
| UN proper shipping name    | PAINT  | PAINT  | PAINT  |
| Transport hazard class(es) | 3      | 3      | 3      |
| Packing group              | III    | III    | III    |
|                            |        |        |        |

## Section 14. Transport information

|                                    |  |                              |  |
|------------------------------------|--|------------------------------|--|
| <b>Environmental hazards</b>       | Yes. The environmentally hazardous substance mark is not required. | Yes.                         | Yes. The environmentally hazardous substance mark is not required. |
| <b>Marine pollutant substances</b> | Not applicable.  | (dicopper oxide, zinc oxide) | Not applicable.  |

### Additional information

- UN** : None identified.
- 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.

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

**Transport in bulk according to IMO instruments** : Not applicable.

## Section 15. Regulatory information

### TCCSCA List of toxic chemicals

Not applicable.

### TCCSCA List of concerned chemicals

Not applicable.

**List of chemicals for which manufacturing or handling is defined as "work specially hazardous to health"** : This product contains substances "Specially hazardous to health": xylene, toluene, lead monoxide.

Regulations Applicable:

1. Rules for Occupational Safety and Health Facilities
2. Regulations for the Labeling and Hazard Communication of Hazardous Chemicals
3. Prevention Rules for Organic Solvent Intoxication/Poisoning.
4. Standards of Permissible Exposure Limits of Airborne Hazardous Substances in Workplace
5. Traffic Safety Regulation of Road.

## Section 16. Other information

**Section 16. Other information**

|   |   |  |
|---|---|--|
| <b>References</b>                         | Not available.  |  |
| <b>Organisation that prepared the SDS</b> | <b>Name:</b> PPG Industries International Inc., Taiwan Branch   |  |
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| <b>Person who prepared the SDS</b>        | <b>Title:</b><br>Technical manager<br>Technical manager   | <b>Name: (Signature):</b><br>Tony Cheng<br>Daniel Wu |
|   | <b>Date of issue</b> 25 October 2023  |  |

**Date of previous issue** : 11/9/2022

**Version** : 2

✔ Indicates information that has changed from previously issued version.

**Remarks** : New SDS layout incorporating TW Table 2017

**Key to abbreviations** :

- ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
- ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
- ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- IATA = International Air Transport Association
- IMDG = International Maritime Dangerous Goods
- LogPow = logarithm of the octanol/water partition coefficient
- MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
- RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
- UN = United Nations

**Disclaimer**

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