

# SAFETY DATA SHEET



Date of issue/Date of revision 30 October 2023

Version 2.01

## Section 1. Identification

**Product code** : 00444896  
**Product name** : SIGMA ECOFLEET 530 BROWN  
**CAS number** : Not applicable.  
**EC number** : Mixture.  
**Product type** : Liquid.

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

**Product use** : Antifouling products  
Professional applications, Used by spraying.  
**Uses advised against** : Product is not intended, labelled or packaged for consumer use.

**Supplier's details** : PPG Yung Chi Coatings Co. Ltd  
Lot 219, Amata Street, Long Binh IZ  
Bien Hoa City, Dong Nai Province  
Vietnam  
Tel : +84 61 3936121/22

**Emergency telephone number (with hours of operation)** : CHEMTREC +(84)-444581938 (CCN 17704)

## 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 IRRITATION - Category 2  
SERIOUS EYE DAMAGE - Category 1  
SKIN SENSITIZATION - Category 1  
TOXIC TO REPRODUCTION - Category 2  
AQUATIC TOXICITY (ACUTE) - Category 1  
AQUATIC TOXICITY (CHRONIC) - Category 1  
Percentage of the mixture consisting of ingredient(s) of unknown acute oral toxicity: 4.9%  
Percentage of the mixture consisting of ingredient(s) of unknown acute dermal toxicity: 14.3%  
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: 10.7%

### GHS label elements

## Section 2. Hazards identification

**Hazard pictograms**

:

**Signal word**

: Danger

**Hazard statements**

: Flammable liquid and vapor.  
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.  
Suspected of damaging fertility or the unborn child.  
Very toxic to aquatic life with long lasting effects.

**Precautionary statements****Prevention**

: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. 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 only outdoors or in a well-ventilated area. Avoid release to the environment. Avoid breathing vapor. 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 exposed or concerned: Get medical advice or attention. 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.

**Disposal**

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

**Routes of entry**

: Not available.

**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

**CAS number/other identifiers****CAS number**

: Not applicable.

**EC number**

: Mixture.

### Section 3. Composition/information on ingredients

Ingredient name	CAS number	Chemical formula	%
dicopper oxide	1317-39-1	Cu <sub>2</sub> -O	≥25 - ≤50
zinc oxide	1314-13-2	O-Zn	≥10 - ≤16
rosin	8050-09-7	C <sub>20</sub> H <sub>28</sub> 32O <sub>2</sub>	≥10 - ≤15
5-methylhexan-2-one	110-12-3	C <sub>7</sub> -H <sub>14</sub> -O	≤10
xylene	1330-20-7	C <sub>8</sub> -H <sub>10</sub>	≤9.1
Propane, 1-(ethenyloxy)-2-methyl-, polymer with chloroethene	25154-85-2	(C <sub>6</sub> H <sub>12</sub> O.C <sub>2</sub> H <sub>3</sub> Cl) <sub>x</sub>	≤5
Talc , not containing asbestiform fibres	14807-96-6	3Mg-O.4Si-O <sub>2</sub> . H <sub>2</sub> -O	≤5
ethylbenzene	100-41-4	C <sub>8</sub> -H <sub>10</sub>	≤5
4,5-dichloro-2-octyl-2H-isothiazol-3-one	64359-81-5	C <sub>11</sub> -H <sub>17</sub> -Cl <sub>2</sub> -N-O-S	≤3
copper oxide	1317-38-0	Cu-O	<1

There are no 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.

SUB codes represent substances without registered CAS Numbers.

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

### Section 4. First aid measures

#### Description of necessary 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 recognized skin cleanser. Do NOT use solvents or thinners.
- Ingestion** : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do NOT induce vomiting.

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

##### Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : Harmful if inhaled.
- 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:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

## Section 4. First aid measures

- Skin contact** : Adverse symptoms may include the following:  
pain or irritation  
redness  
dryness  
cracking  
blistering may occur  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:  
stomach pains  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

### 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. Fire-fighting measures

### 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.

- Specific hazards arising from the chemical** : Flammable liquid and vapor. 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  
halogenated compounds  
metal oxide/oxides
- 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.

## Section 5. Fire-fighting measures

**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

**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 spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

**For emergency responders** : If specialized 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".

**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 materials 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 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.

## Section 7. Handling and storage

### Precautions for safe handling

**Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor 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

## Section 7. Handling and storage

### Advice on general occupational hygiene

retain product residue and can be hazardous. Do not reuse container.

- : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

### 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 oxidizing 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 unlabeled 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
dicopper oxide	<b>Ministry of Health (Viet Nam, 6/2019). [copper and compounds (dust)]</b> TWA: 0.5 mg/m <sup>3</sup> 8 hours. Form: Dust <b>Ministry of Health (Viet Nam, 6/2019). [copper compounds]</b> STEL: 1 mg/m <sup>3</sup> 15 minutes. TWA: 0.5 mg/m <sup>3</sup> 8 hours. <b>Ministry of Health (Viet Nam, 6/2019). [copper and compounds (fume)]</b> TWA: 0.1 mg/m <sup>3</sup> 8 hours. Form: vapour, fume
zinc oxide	<b>Ministry of Health (Viet Nam, 6/2019). [zinc oxide (dust, fume)]</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Dust and fumes <b>Ministry of Health (Viet Nam, 6/2019). [bụi oxit kẽm]</b> TWA: 2 mg/m <sup>3</sup> 8 hours. Form: respirable dust TWA: 4 mg/m <sup>3</sup> 8 hours. Form: total dust concentration
rosin	<b>ACGIH TLV (United States, 1/2022). [resin acids as total Resin acids] Skin sensitizer. Inhalation sensitizer.</b> TWA: 0.001 mg/m <sup>3</sup> , (as total Resin acids) 8 hours. Form: Inhalable fraction
5-methylhexan-2-one	<b>ACGIH TLV (United States, 1/2022).</b> TWA: 93 mg/m <sup>3</sup> 8 hours. TWA: 20 ppm 8 hours. STEL: 50 ppm 15 minutes. STEL: 234 mg/m <sup>3</sup> 15 minutes.
xylene	<b>Ministry of Health (Viet Nam, 6/2019).</b>

## Section 8. Exposure controls/personal protection

Talc , not containing asbestiform fibres

ethylbenzene

copper oxide

### [xylene]

STEL: 300 mg/m<sup>3</sup> 15 minutes.

TWA: 100 mg/m<sup>3</sup> 8 hours.

**Ministry of Health (Viet Nam, 6/2019).**

### [soapstone]

TWA: 3 mg/m<sup>3</sup> 8 hours. Form: inhalable dust

**Ministry of Health (Viet Nam, 6/2019).** [bụi talc]

TWA: 1 mg/m<sup>3</sup> 8 hours. Form: respirable dust

TWA: 2 mg/m<sup>3</sup> 8 hours. Form: total dust concentration

**ACGIH TLV (United States, 1/2022).**

### Ototoxicant.

TWA: 20 ppm 8 hours.

**Ministry of Health (Viet Nam, 6/2019).**

### [copper and compounds (dust)]

TWA: 0.5 mg/m<sup>3</sup> 8 hours. Form: Dust

**Ministry of Health (Viet Nam, 6/2019).**

### [copper compounds]

STEL: 1 mg/m<sup>3</sup> 15 minutes.

TWA: 0.5 mg/m<sup>3</sup> 8 hours.

**Ministry of Health (Viet Nam, 6/2019).**

### [copper and compounds (fume)]

TWA: 0.1 mg/m<sup>3</sup> 8 hours. Form: vapour, fume

### Recommended monitoring procedures

: Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

### 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, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

### 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.

### 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.

#### Skin protection



## Section 8. Exposure controls/personal protection

<b>Hand protection</b>	: 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.
<b>Gloves</b>	: butyl rubber
<b>Body protection</b>	: 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.
<b>Other skin protection</b>	: 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.
<b>Respiratory protection</b>	: 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.

## Section 9. Physical and chemical properties

### Appearance

<b>Physical state</b>	: Liquid.				
<b>Color</b>	: Brown.				
<b>Odor</b>	: Aromatic.				
<b>Odor threshold</b>	: Not available.				
<b>pH</b>	: Not applicable.				
<b>Melting point</b>	: Not available.				
<b>Boiling point</b>	: >37.78°C (>100°F)				
<b>Flash point</b>	: Closed cup: 30°C (86°F)				
<b>Evaporation rate</b>	: Not available.				
<b>Flammability (solid, gas)</b>	: Not available.				
<b>Lower and upper explosive (flammable) limits</b>	: Greatest known range: Lower: 1.8% Upper: 9% (5-methylhexan-2-one)				
<b>Vapor pressure</b>	: Not available.				
<b>Vapor density</b>	: Not available.				
<b>Relative density</b>	: 2.02				
<b>Solubility(ies)</b>	<table border="1"> <thead> <tr> <th>Media</th><th>Result</th></tr> </thead> <tbody> <tr> <td>cold water</td><td>Not soluble</td></tr> </tbody> </table>	Media	Result	cold water	Not soluble
Media	Result				
cold water	Not soluble				
<b>Partition coefficient: n-octanol/water</b>	: Not applicable.				
<b>Auto-ignition temperature</b>	: Not available.				
<b>Decomposition temperature</b>	: Not available.				
<b>Viscosity</b>	: Kinematic (40°C): >21 mm <sup>2</sup> /s				



## Section 10. Stability and reactivity

- Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- 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: oxidizing agents, strong alkalis, strong acids.
- Hazardous decomposition products** : Depending on conditions, decomposition products may include the following materials: carbon oxides nitrogen oxides sulfur oxides halogenated compounds metal oxide/oxides

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
dicopper 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	-
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	-
rosin	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	7600 mg/kg	-
5-methylhexan-2-one	LC50 Inhalation Gas.	Rat	5000 ppm	4 hours
	LD50 Dermal	Rabbit	8.14 g/kg	-
	LD50 Oral	Rat	5657 mg/kg	-
xylene	LD50 Dermal	Rabbit	1.7 g/kg	-
	LD50 Oral	Rat	4.3 g/kg	-
ethylbenzene	LC50 Inhalation Vapor	Rat	17.8 mg/l	4 hours
	LD50 Dermal	Rabbit	17.8 g/kg	-
	LD50 Oral	Rat	3.5 g/kg	-
4,5-dichloro-2-octyl-2H-isothiazol-3-one	LC50 Inhalation Dusts and mists	Rat	0.16 mg/l	4 hours
	LD50 Dermal	Rabbit	3.9 g/kg	-
	LD50 Oral	Rat	567 mg/kg	-
copper oxide	LD50 Oral	Rat	>2000 mg/kg	-

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

#### Irritation/Corrosion

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

#### Conclusion/Summary

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

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

## Section 11. Toxicological information

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

### Sensitization

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

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

### Mutagenicity

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

### Carcinogenicity

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

### Reproductive toxicity

Product/ingredient name	Maternal toxicity	Fertility	Development toxin	Species	Dose	Exposure
5-methylhexan-2-one	-	-	Equivocal	Rabbit	Inhalation: 1250 ppm	-

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

### Teratogenicity

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

### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
xylene	Category 3	-	Respiratory tract irritation
Talc , not containing asbestiform fibres	Category 3	-	Respiratory tract irritation
4,5-dichloro-2-octyl-2H-isothiazol-3-one	Category 3	-	Respiratory tract irritation

### Specific target organ toxicity (repeated exposure)

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

### Aspiration hazard

Name	Result
5-methylhexan-2-one	ASPIRATION HAZARD - Category 2
xylene	ASPIRATION HAZARD - Category 1
ethylbenzene	ASPIRATION HAZARD - Category 1

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

### Potential acute health effects

**Eye contact** : Causes serious eye damage.

**Inhalation** : Harmful if inhaled.

**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.

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

## Section 11. Toxicological information

- Eye contact** : Adverse symptoms may include the following:  
pain  
watering  
redness
- Inhalation** : Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:  
pain or irritation  
redness  
dryness  
cracking  
blistering may occur  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:  
stomach pains  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

- Potential immediate effects** : There are no data available on the mixture itself.
- Potential delayed effects** : There are no data available on the mixture itself.

#### Long term exposure

- Potential immediate effects** : There are no data available on the mixture itself.
- Potential delayed effects** : There are no data available on the mixture itself.

#### 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** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Reproductive toxicity** : Suspected of damaging fertility or the unborn child.

### Numerical measures of toxicity

#### Acute toxicity estimates

Route	ATE value
Oral	1176.1 mg/kg
Dermal	2761.13 mg/kg
Inhalation (gases)	56017.78 ppm
Inhalation (vapors)	53.7 mg/l
Inhalation (dusts and mists)	2.02 mg/l

**Other information** :

## Section 11. Toxicological 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 vapor/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 zinc oxide	LC50 0.003 mg/l	Fish	96 hours
	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
5-methylhexan-2-one ethylbenzene	Chronic NOEC 0.017 mg/l Fresh water	Algae	72 hours
	Acute LC50 159 mg/l	Fish	96 hours
	Acute EC50 1.8 mg/l Fresh water	Daphnia	48 hours
4,5-dichloro-2-octyl-2H-isothiazol-3-one	Chronic NOEC 1 mg/l Fresh water	Daphnia - <i>Ceriodaphnia dubia</i>	-
	Acute EC50 267.368 µg/l Marine water	Algae - <i>Nitzschia pungens</i>	96 hours
	Acute LC50 0.318 mg/l Marine water	Crustaceans - <i>Artemia sp.</i>	48 hours
	Acute LC50 0.0027 mg/l Fresh water	Fish	96 hours
	Chronic NOEC 19.789 µg/l Marine water	Algae - <i>Nitzschia pungens</i>	96 hours
	Chronic NOEC 0.00056 mg/l Fresh water	Fish	97 days

### Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
5-methylhexan-2-one ethylbenzene	OECD 301D	67 % - Readily - 28 days	-	-
	-	79 % - Readily - 10 days	-	-
Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability	
5-methylhexan-2-one xylene ethylbenzene	-	-	Readily	
	-	-	Readily	
	-	-	Readily	

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
rosin	1.9 to 7.7	-	High
5-methylhexan-2-one	1.88	-	Low
xylene	3.12	7.4 to 18.5	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 minimized 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. Vapor 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 spilled 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
Environmental hazards	Yes. The environmentally hazardous substance mark is not required.	Yes.	Yes. The environmentally hazardous substance mark is not required.
Marine pollutant substances	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

**Safety, health and environmental regulations specific for the product** : No known specific national and/or regional regulations applicable to this product (including its ingredients).

[Circular no. 05/1999/TT-BYT](#)

Ingredient name	Category	Notes
xylene	Category 2	
lead monoxide	Category 2	
benzene	Category 1	
toluene	Category 2	

**Toxic classification (TCVN : 3164-79)**

[International regulations](#)

[Montreal Protocol](#)

Not listed.

[Stockholm Convention on Persistent Organic Pollutants](#)

Not listed.

## Section 16. Other information

[History](#)

**Date of issue/Date of revision** : 30 October 2023

**Date of previous issue** : 6/20/2023

**Version** : 2.01

**Prepared by** : EHS

**Key to abbreviations** : ATE = Acute Toxicity Estimate  
 BCF = Bioconcentration Factor  
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
 IATA = International Air Transport Association  
 IBC = Intermediate Bulk Container  
 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)  
 UN = United Nations

**References** : Not available.

Indicates information that has changed from previously issued version.

[Notice to reader](#)

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.