



Date of issue 15 July 2026
Version 2.03

Section 1. Product and company identification

Product name : SIGMA SAILADVANCE NX REDBROWN
Product code : 000010024035
Other means of identification : 00444628; 00444630 ; 00482013 ; 00482040 ; 30013527 ; 30015659 ; 30088026
Product type : Liquid.

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

Identified uses Coating. Paints. Painting-related materials.	
Uses advised against	Reason
Not applicable.	

Supplier's details:

Supplier : PPG Industrial do Brasil – Tintas e Vernizes Ltda
Via Anhanguera KM 106, Bairro Sao Judas Tadeu
Sumare / SP, Brasil
55 19 2103-6000 (Recepção e Portaria)

Email address: : fds@ppg.com

Emergency telephone number : 0800 707 1767 / 0800 707 7022 – Empresa Ambipar response (24hs)
0800 014 8110 / (011)2661-8571 – CEATOX - Centro de Assistência Toxicológica
(atendimento 24hs)

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
CARCINOGENICITY - Category 1B
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
AQUATIC HAZARD (ACUTE) - Category 1
AQUATIC HAZARD (LONG-TERM) - Category 1

Section 2. Hazards identification

Target organs

- : Contains material which causes damage to the following organs: brain, central nervous system (CNS).
Contains material which may cause damage to the following organs: blood, kidneys, lungs, the nervous system, liver, heart, gastrointestinal tract, cardiovascular system, upper respiratory tract, skin, ears, eye, lens or cornea.

Percentage of the mixture consisting of ingredient(s) of unknown acute oral toxicity: 6.8%

Percentage of the mixture consisting of ingredient(s) of unknown acute dermal toxicity: 31.3%

Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 30.6%

Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 19.4%

GHS label elements

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.
May cause respiratory irritation.
May cause cancer.
Very toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention

- : 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. Avoid release to the environment. Avoid breathing vapor. Wash thoroughly after handling.

Response

- : Collect spillage. IF exposed or concerned: Get medical advice or attention. IF INHALED: Call a POISON CENTER or doctor if you feel unwell. 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. Take off contaminated clothing and wash it before reuse. 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 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.

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

Other means of identification : 00444628; 00444630 ; 00482013 ; 00482040 ; 30013527 ; 30015659 ; 30088026

Ingredient name	%	CAS number/other identifiers	Classification
dicopper oxide	≥20 - ≤30	1317-39-1	ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 5 ACUTE TOXICITY (inhalation) - Category 4 SERIOUS EYE DAMAGE - Category 1 AQUATIC HAZARD (ACUTE) - Category 1 AQUATIC HAZARD (LONG-TERM) - Category 1
xylene	≥10 - ≤20	1330-20-7	FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (oral) - Category 5 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 ASPIRATION HAZARD - Category 1 AQUATIC HAZARD (LONG-TERM) - Category 3
Talc , not containing asbestiform fibres	≥10 - ≤20	14807-96-6	CARCINOGENICITY - Category 1B SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
diiron trioxide	≥5 - ≤10	1309-37-1	Not classified as hazardous according to ABNT NBR 14725
rosin	≥5 - ≤9.5	8050-09-7	ACUTE TOXICITY (dermal) - Category 5 SKIN SENSITIZATION - Category 1B AQUATIC HAZARD (LONG-TERM) - Category 4
ethylbenzene	≥3 - ≤5	100-41-4	FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (oral) - Category 5 ACUTE TOXICITY (inhalation) - Category 4

Section 3. Composition/information on ingredients

zinc oxide	$\geq 1 - \leq 4$	1314-13-2	CARCINOGENICITY - Category 2 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 ASPIRATION HAZARD - Category 1 AQUATIC HAZARD (ACUTE) - Category 2 AQUATIC HAZARD (LONG-TERM) - Category 3
Paraffin waxes and Hydrocarbon waxes, chloro	$\geq 1 - \leq 3$	63449-39-8	ACUTE TOXICITY (dermal) - Category 5 AQUATIC HAZARD (ACUTE) - Category 1 AQUATIC HAZARD (LONG-TERM) - Category 1
1-methoxy-2-propanol	$\geq 1 - \leq 3$	107-98-2	AQUATIC HAZARD (LONG-TERM) - Category 4
bis(1-hydroxy-1H-pyridine-2-thionato-O,S)copper	$\geq 0.3 - \leq 2.3$	14915-37-8	FLAMMABLE LIQUIDS - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
Solvent naphtha (petroleum), light aromatic	≤ 1.4	64742-95-6	ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (inhalation) - Category 2 SERIOUS EYE DAMAGE - Category 1 AQUATIC HAZARD (ACUTE) - Category 1 AQUATIC HAZARD (LONG-TERM) - Category 1
4,5-dichloro-2-octyl-2H-isothiazol-3-one	< 1	64359-81-5	FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (dermal) - Category 5 SKIN IRRITATION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1 AQUATIC HAZARD (ACUTE) - Category 2 AQUATIC HAZARD (LONG-TERM) - Category 2
			ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 2 SKIN CORROSION - Category 1 SERIOUS EYE DAMAGE - Category

Section 3. Composition/information on ingredients

			1 SKIN SENSITIZATION - Category 1A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 AQUATIC HAZARD (ACUTE) - Category 1 AQUATIC HAZARD (LONG-TERM) - Category 1
copper oxide	<1	1317-38-0	ACUTE TOXICITY (oral) - Category 5 AQUATIC HAZARD (ACUTE) - Category 1 AQUATIC HAZARD (LONG-TERM) - Category 1
copper	<1	7440-50-8	AQUATIC HAZARD (ACUTE) - Category 1 AQUATIC HAZARD (LONG-TERM) - Category 3

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

- 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.

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.
- Specific treatments** : The exposed person may need to be kept under medical surveillance for 48 hours. 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.

Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : Harmful if inhaled. May cause respiratory irritation.

Section 4. First aid measures

- 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.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO₂, 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
carbonyl halides
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.

- 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. Avoid breathing vapor. Put on appropriate personal protective equipment. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate.
- 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

Section 6. Accidental release measures

- 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** : 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. 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 retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
- 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

dicopper oxide	ACGIH TLV (United States, 1/2025) [copper fume] TWA 8 hours: 0.2 mg/m³. Form: Fume. Ministry of Labor and Employment (Brazil, 11/2001) [Xylenes (o-, m-, p- isomers)] TWA 8 hours: 78 ppm. TWA 8 hours: 340 mg/m³. ACGIH TLV (United States, 1/2025) TWA 8 hours: 2 mg/m³. Form: Respirable fraction. ACGIH TLV (United States, 1/2025) TWA 8 hours: 5 mg/m³. Form: Respirable fraction. ACGIH TLV (United States, 1/2025) [resin acids] Skin sensitizer , Inhalation sensitizer. TWA 8 hours: 0.001 mg/m³ (as total Resin acids). Form: Inhalable fraction. Ministry of Labor and Employment (Brazil, 11/2001) TWA 8 hours: 78 ppm. TWA 8 hours: 340 mg/m³. ACGIH TLV (United States, 1/2025) TWA 8 hours: 2 mg/m³. Form: Respirable fraction. STEL 15 minutes: 10 mg/m³. Form: Respirable fraction. ACGIH TLV (United States, 1/2025) TWA 8 hours: 50 ppm. TWA 8 hours: 184 mg/m³. STEL 15 minutes: 100 ppm. STEL 15 minutes: 369 mg/m³. ACGIH TLV (United States, 1/2025) [copper fume] TWA 8 hours: 0.2 mg/m³. Form: Fume. ACGIH TLV (United States, 1/2025) [copper dusts and mists] TWA 8 hours: 1 mg/m³ (as Cu). Form: Dust and mist. ACGIH TLV (United States, 1/2025) [copper fume] TWA 8 hours: 0.2 mg/m³. Form: Fume.
xylene	
Talc , not containing asbestiform fibres	
diiron trioxide	
rosin	
ethylbenzene	
zinc oxide	
1-methoxy-2-propanol	
copper oxide	
copper	

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.

Section 8. Exposure controls/personal protection

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 protection : Chemical splash goggles and face shield.

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.

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.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Color : Not available.

Odor : Characteristic.

pH : Not applicable.

Melting point : Not available.

Boiling point : >37.78°C (>100°F)

Flash point : Closed cup: 25°C (77°F)

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Section 9. Physical and chemical properties

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : Not available.

Relative density : 1.72

Solubility(ies) :	Media	Result
	cold water	Not soluble

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

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Dynamic (room temperature): Not available.
Kinematic (room temperature): Not available.
Kinematic (40°C (104°F)): >21 mm²/s (>21 cSt)

Particle characteristics

Median particle size : Not applicable.

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 carbonyl halides metal oxide/oxides

Section 11. Toxicological information

Information on toxicological effects

Harmful if swallowed or if inhaled.
May be harmful in contact with skin.
Causes serious eye damage.
Causes skin irritation.
May cause an allergic skin reaction.
May cause cancer.
May cause respiratory irritation.

Acute toxicity

Section 11. Toxicological information

Product/ingredient name	Result	Dose
copper 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]
xylene	Rat - Oral - LD50	4.3 g/kg
	Rabbit - Dermal - LD50	1.7 g/kg
Talc , not containing asbestiform fibres	Not available	Not available
diiron trioxide	Rat - Oral - LD50	10 g/kg
	Rat - Inhalation - LC50 Dusts and mists	>5 mg/l [4 hours]
rosin	Rat - Oral - LD50	7600 mg/kg
	Rat - Dermal - LD50	>2000 mg/kg
ethylbenzene	Rat - Oral - LD50	3.5 g/kg
	Rabbit - Dermal - LD50	17.8 g/kg
	Rat - Inhalation - LC50 Vapor	17.8 mg/l [4 hours]
zinc oxide	Rat - Oral - LD50	>5000 mg/kg
	Rat - Dermal - LD50	>2000 mg/kg
	Rat - Inhalation - LC50 Dusts and mists	>5700 mg/m ³ [4 hours]
Paraffin waxes and Hydrocarbon waxes, chloro	Rat - Oral - LD50	26100 mg/kg
1-methoxy-2-propanol	Rabbit - Dermal - LD50	13 g/kg
	Rat - Oral - LD50	5.2 g/kg
	Rat - Inhalation - LC50 Vapor	>7000 ppm [6 hours]
bis(1-hydroxy-1H-pyridine-2-thionato-O,S)	Rat - Oral - LD50	1075 mg/kg
copper	Rat - Inhalation - LC50 Dusts and mists	70 mg/m ³ [4 hours]
Solvent naphtha (petroleum), light aromatic	Rat - Oral - LD50	8400 mg/kg
	Rabbit - Dermal - LD50	3.48 g/kg
4,5-dichloro-2-octyl-2H-isothiazol-3-one	Rat - Oral - LD50	567 mg/kg
	Rabbit - Dermal - LD50	3.9 g/kg
	Rat - Inhalation - LC50 Dusts and mists	0.16 mg/l [4 hours]
copper oxide	Rat - Oral - LD50	>2000 mg/kg
copper	Rat - Inhalation - LC50 Dusts and mists	>5.11 mg/l [4 hours]

Conclusion/Summary : Harmful if swallowed or if inhaled.
May be harmful in contact with skin.

Irritation/Corrosion

Product/ingredient name	Species	Dose	Score
copper oxide	Not available	Not available	Not available
xylene	Rabbit - Skin - Moderate irritant	Amount/concentration applied: 500 mg Duration of treatment/exposure: 24 hours	-
Talc , not containing asbestiform fibres	Not available	Not available	Not available
diiron trioxide	Not available	Not available	Not available
rosin	Not available	Not available	Not available
ethylbenzene	Not available	Not available	Not available

Section 11. Toxicological information

zinc oxide	Not available	Not available	Not available
Paraffin waxes and Hydrocarbon waxes, chloro	Not available	Not available	Not available
1-methoxy-2-propanol	Not available	Not available	Not available
bis(1-hydroxy-1H-pyridine-2-thionato-O,S)copper	Not available	Not available	Not available
Solvent naphtha (petroleum), light aromatic	Not available	Not available	Not available
4,5-dichloro-2-octyl-2H-isothiazol-3-one	Not available	Not available	Not available
copper oxide	Not available	Not available	Not available
copper	Not available	Not available	Not available

Conclusion/Summary

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

Sensitization

Product/ingredient name	Species	Result
dicopper oxide	Not available	Not available
xylene	Not available	Not available
Talc , not containing asbestiform fibres	Not available	Not available
diiron trioxide	Not available	Not available
rosin	Not available	Not available
ethylbenzene	Not available	Not available
zinc oxide	Not available	Not available
Paraffin waxes and Hydrocarbon waxes, chloro	Not available	Not available
1-methoxy-2-propanol	Not available	Not available
bis(1-hydroxy-1H-pyridine-2-thionato-O,S)	Not available	Not available
copper	Not available	Not available
Solvent naphtha (petroleum), light aromatic	Not available	Not available
4,5-dichloro-2-octyl-2H-isothiazol-3-one	Not available	Not available
copper oxide	Not available	Not available
copper	Not available	Not available

Conclusion/Summary

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

Mutagenicity

Product/ingredient name	Species	Result
dicopper oxide	Not available	Not available
xylene	Not available	Not available
Talc , not containing asbestiform fibres	Not available	Not available
diiron trioxide	Not available	Not available
rosin	Not available	Not available
ethylbenzene	Not available	Not available
zinc oxide	Not available	Not available
Paraffin waxes and Hydrocarbon waxes, chloro	Not available	Not available

Section 11. Toxicological information

1-methoxy-2-propanol	Not available	Not available
bis(1-hydroxy-1H-pyridine-2-thionato-O,S)	Not available	Not available
copper		
Solvent naphtha (petroleum), light aromatic	Not available	Not available
4,5-dichloro-2-octyl-2H-isothiazol-3-one	Not available	Not available
copper oxide	Not available	Not available
copper	Not available	Not available

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

Carcinogenicity

Product/ingredient name	Species	Result
copper oxide xylene Talc , not containing asbestiform fibres diiron trioxide rosin ethylbenzene zinc oxide Paraffin waxes and Hydrocarbon waxes, chloro 1-methoxy-2-propanol bis(1-hydroxy-1H-pyridine-2-thionato-O,S) copper Solvent naphtha (petroleum), light aromatic 4,5-dichloro-2-octyl-2H-isothiazol-3-one copper oxide copper	Not available Not available Not available Not available Not available Not available Not available Not available Not available Not available Not available Not available Not available Not available Not available	Not available Not available Not available Not available Not available Not available Not available Not available Not available Not available Not available Not available Not available Not available Not available

Conclusion/Summary : May cause cancer.

Classification

Product/ingredient name	OSHA	IARC	NTP
xylene	-	3	-
Talc , not containing asbestiform fibres	-	2A	-
diiron trioxide	-	3	-
ethylbenzene	-	2B	-

Carcinogen Classification code:

IARC: 1, 2A, 2B, 3, 4

NTP: Known to be a human carcinogen; Reasonably anticipated to be a human carcinogen

OSHA: +

Not listed/not regulated: -

Reproductive toxicity

Product/ingredient name

Section 11. Toxicological information

	Species	Result
dicopper oxide	Not available	Not available
xylene	Not available	Not available
Talc , not containing asbestiform fibres	Not available	Not available
diiron trioxide	Not available	Not available
rosin	Not available	Not available
ethylbenzene	Not available	Not available
zinc oxide	Not available	Not available
Paraffin waxes and Hydrocarbon waxes, chloro	Not available	Not available
1-methoxy-2-propanol	Not available	Not available
bis(1-hydroxy-1H-pyridine-2-thionato-O,S)copper	Not available	Not available
Solvent naphtha (petroleum), light aromatic	Not available	Not available
4,5-dichloro-2-octyl-2H-isothiazol-3-one	Not available	Not available
copper oxide	Not available	Not available
copper	Not available	Not available

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

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
dicopper oxide	None.	None.	None.
xylene	Category 3	-	Respiratory tract irritation
Talc , not containing asbestiform fibres	Category 3	-	Respiratory tract irritation
diiron trioxide	None.	None.	None.
rosin	None.	None.	None.
ethylbenzene	None.	None.	None.
zinc oxide	None.	None.	None.
Paraffin waxes and Hydrocarbon waxes, chloro	None.	None.	None.
1-methoxy-2-propanol	Category 3	-	Narcotic effects
bis(1-hydroxy-1H-pyridine-2-thionato-O,S)copper	None.	None.	None.
Solvent naphtha (petroleum), light aromatic	Category 3	-	Narcotic effects
4,5-dichloro-2-octyl-2H-isothiazol-3-one	Category 3	-	Respiratory tract irritation
copper oxide	None.	None.	None.
copper	None.	None.	None.

Conclusion/Summary : May cause respiratory irritation.

Specific target organ toxicity (repeated exposure)

Section 11. Toxicological information

Name	Category	Route of exposure	Target organs
dicopper oxide	None.	None.	None.
xylene	None.	None.	None.
Talc , not containing asbestiform fibres	None.	None.	None.
diiron trioxide	None.	None.	None.
rosin	None.	None.	None.
ethylbenzene	Category 2	-	hearing organs
zinc oxide	None.	None.	None.
Paraffin waxes and Hydrocarbon waxes, chloro	None.	None.	None.
1-methoxy-2-propanol	None.	None.	None.
bis(1-hydroxy-1H-pyridine-2-thionato-O,S)copper	None.	None.	None.
Solvent naphtha (petroleum), light aromatic	None.	None.	None.
4,5-dichloro-2-octyl-2H-isothiazol-3-one	None.	None.	None.
copper oxide	None.	None.	None.
copper	None.	None.	None.

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

Target organs : Contains material which causes damage to the following organs: brain, central nervous system (CNS).
Contains material which may cause damage to the following organs: blood, kidneys, lungs, the nervous system, liver, heart, gastrointestinal tract, cardiovascular system, upper respiratory tract, skin, ears, eye, lens or cornea.

Aspiration hazard

Name	Result
dicopper oxide	None.
xylene	ASPIRATION HAZARD - Category 1
xylene	None.
Talc , not containing asbestiform fibres	None.
diiron trioxide	None.
rosin	None.
ethylbenzene	ASPIRATION HAZARD - Category 1
ethylbenzene	None.
zinc oxide	None.
Paraffin waxes and Hydrocarbon waxes, chloro	None.
1-methoxy-2-propanol	None.
bis(1-hydroxy-1H-pyridine-2-thionato-O,S)copper	None.
Solvent naphtha (petroleum), light aromatic	ASPIRATION HAZARD - Category 1
Solvent naphtha (petroleum), light aromatic	None.
4,5-dichloro-2-octyl-2H-isothiazol-3-one	None.
copper oxide	None.
copper	None.

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

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye damage.

Section 11. Toxicological information

- 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.

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:
 pain
 watering
 redness
- Inhalation** : Adverse symptoms may include the following:
 respiratory tract irritation
 coughing
- 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

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

- Conclusion/Summary** : There are no data available on the mixture itself. Exposure to component solvent vapor concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. Solvents may cause some of the above effects by absorption through the skin. There is some evidence that repeated exposure to organic solvent vapors in combination with constant loud noise can cause greater hearing loss than expected from exposure to noise alone. If splashed in the eyes, the liquid may cause irritation and reversible damage. Ingestion may cause nausea, diarrhea and vomiting. This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

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

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Product/ingredient name	Result
dicopper oxide	Not available
xylene	Not available
Talc , not containing asbestiform fibres	Not available
diiron trioxide	Not available
rosin	Not available
ethylbenzene	Not available
zinc oxide	Not available
Paraffin waxes and Hydrocarbon waxes, chloro	Not available
1-methoxy-2-propanol	Not available
bis(1-hydroxy-1H-pyridine-2-thionato-O,S)	Not available
copper	
Solvent naphtha (petroleum), light aromatic	Not available
4,5-dichloro-2-octyl-2H-isothiazol-3-one	Not available
copper oxide	Not available
copper	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** : May cause 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.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
SIGMA SAILADVANCE NX REDBROWN	1539.9	2683.3	Not available	13.1	1.4
dicopper oxide	500	2500	Not available	Not available	3.34
xylene	4300	1700	Not available	11	1.5
Talc , not containing asbestiform fibres	Not available	Not available	Not available	Not available	Not available
diiron trioxide	10000	Not available	Not available	Not available	Not available
rosin	7600	2500	Not available	Not available	Not available
ethylbenzene	3500	17800	Not available	17.8	1.5
zinc oxide	Not available	2500	Not available	Not available	Not available
Paraffin waxes and Hydrocarbon waxes, chloro	26100	Not available	Not available	Not available	Not available
1-methoxy-2-propanol	5200	13000	Not available	Not available	Not available
bis(1-hydroxy-1H-pyridine-2-thionato-O,S)copper	1075	Not	Not	0.5	0.07

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Solvent naphtha (petroleum), light aromatic	8400	available 3480	available Not available	Not available	Not available
4,5-dichloro-2-octyl-2H-isothiazol-3-one	567	1100	Not available	Not available	0.16
copper oxide	2500	Not available	Not available	Not available	Not available
copper	Not available	Not available	Not available	Not available	Not available

Other information : Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Dose / Exposure
dicopper oxide	LC50	Fish	0.003 mg/l [96 hours]
diiron trioxide	Acute - EC50	Daphnia	>100 mg/l [48 hours]
ethylbenzene	Acute - EC50 - Fresh water	Daphnia	1.8 mg/l [48 hours]
	Chronic - NOEC - Fresh water	Daphnia - <i>Ceriodaphnia dubia</i>	1 mg/l
zinc oxide	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]
1-methoxy-2-propanol	Acute - LC50 - Fresh water	Fish - Goldfish	>4500 mg/l [96 hours]
	Acute - LC50	Daphnia - Daphnia	23300 mg/l [48 hours]
Solvent naphtha (petroleum), light aromatic	Acute - LC50	Fish	8.2 mg/l [96 hours]
4,5-dichloro-2-octyl-2H-isothiazol-3-one	Acute - EC50 - Marine water	Algae - Diatom - <i>Nitzschia pungens</i>	267.368 µg/l [96 hours]
	Chronic - NOEC - Marine water	Algae - Diatom - <i>Nitzschia pungens</i>	19.789 µg/l [96 hours]
	Acute - LC50 - Marine water	Crustaceans - Brine shrimp - <i>Artemia sp.</i>	0.318 mg/l [48 hours]
	Acute - LC50 - Fresh water	Fish	0.0027 mg/l [96 hours]
	Chronic - NOEC - Fresh water	Fish	0.00056 mg/l [97 days]
copper	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 : Not available.

Persistence/degradability

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

Section 12. Ecological information

Conclusion/Summary : Not available.

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

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
copper oxide	None.	None.	None.
xylene	3.12	7.4 to 18.5	Low
Talc , not containing asbestiform fibres	None.	None.	None.
diiron trioxide	None.	None.	None.
rosin	1.9 to 7.7	None.	High
ethylbenzene	3.6	79.43	Low
zinc oxide	None.	None.	None.
Paraffin waxes and Hydrocarbon waxes, chloro	7.46 to 11.48	None.	High
1-methoxy-2-propanol	<1	None.	Low
bis(1-hydroxy-1H-pyridine- 2-thionato-O,S)copper	None.	None.	None.
Solvent naphtha (petroleum), light aromatic	None.	None.	None.
4,5-dichloro-2-octyl-2H- isothiazol-3-one	None.	None.	None.
copper oxide	None.	None.	None.
copper	None.	None.	None.

Mobility in soil

**Soil/Water partition
coefficient** : 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

Section 13. Disposal considerations

cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	Brazil (ANTT)	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)	Not applicable.

Additional information

- Brazil** : None identified.
- Risk number** : 30
- 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

References : ABNT NBR 14725: 2023 (April 2025)

Section 16. Other information

History

- Date of previous issue** : 4/10/2026
- Version** : 2.03
- Prepared by** : EHS

Section 16. Other information

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

 Indicates information that has changed from previously issued version.

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