

SAFETY DATA SHEET

Micron 77 Black

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

1.1 Product identifier

Product name : Micron 77 Black
Product code : YBA475
Product description : Consumer application of coatings
Professional application of coatings and inks

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

Not applicable.

1.3 Details of the supplier of the safety data sheet

International Paint Ltd.
Stoneygate Lane
Felling
Gateshead
Tyne and Wear
NE10 0JY UK
Tel: +44 (0)191 469 6111 Fax: +44 (0)191 438 3711
e-mail address of person responsible for this SDS : sdsfellinguk@akzonobel.com

1.4 Emergency telephone number

National advisory body/Poison Centre (For use only by licensed medical professionals.)

Telephone number : +44 (0)844 892 0111

Supplier

Telephone number : +44 (0)191 469 6111 (24H)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

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

Flam. Liq. 2, H225
Acute Tox. 4, H302
Acute Tox. 4, H332
Skin Irrit. 2, H315
Eye Dam. 1, H318
Carc. 2, H351
STOT SE 3, H335 (Respiratory tract irritation)
Aquatic Acute 1, H400
Aquatic Chronic 1, H410

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

Classification according to Directive 1999/45/EC [DPD]

The product is classified as dangerous according to Directive 1999/45/EC and its amendments.

SECTION 2: Hazards identification

Classification	: R10 Carc. Cat. 3; R40 T; R23 Xn; R21/22 Xi; R36/37/38 N; R50/53
Physical/chemical hazards	: Flammable.
Human health hazards	: Limited evidence of a carcinogenic effect. Toxic by inhalation. Harmful in contact with skin and if swallowed. Irritating to eyes, respiratory system and skin.
Environmental hazards	: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

See Section 16 for the full text of the R phrases or H statements declared above.

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

2.2 Label elements

Hazard pictograms	: 
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Signal word : Danger

Hazard statements : Highly flammable liquid and vapour.
Harmful if swallowed or if inhaled.
Causes serious eye damage.
Causes skin irritation.
Suspected of causing cancer.
May cause respiratory irritation.
Very toxic to aquatic life with long lasting effects.

Precautionary statements

General	: Keep out of reach of children. Do not handle until all safety precautions have been read and understood.
Prevention	: Do not handle until all safety precautions have been read and understood. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Keep away from heat, sparks, open flames and hot surfaces. - No smoking. Do not breathe dust/fume/gas/mist/vapours/spray. Wear protective gloves and eye/face protection. In case of inadequate ventilation wear respiratory protection.
Response	: IF SWALLOWED: Do NOT induce vomiting. Get immediate medical attention. IF ON SKIN: Wash with plenty of soap and water. Do not use solvents or thinners to clean the skin. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF INHALED: If not breathing, give artificial respiration. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Give nothing by mouth. If skin irritation or rash occurs: Get medical advice/attention. Get medical advice/attention if you feel unwell. Collect spillage.
Storage	: Store in a well-ventilated place. Keep container tightly closed in a cool place.
Disposal	: Do not reuse container. Dispose of containers contaminated by the product in accordance with local or national legal provisions. Keep unnecessary and unprotected personnel from entering.
Hazardous ingredients	: dicopper oxide xylene butan-1-ol bis(1-hydroxy-1H-pyridine-2-thionato-O,S)copper 4-methylpentan-2-one Solvent naphtha (petroleum), heavy arom.

SECTION 2: Hazards identification

Supplemental label elements :

Wear appropriate respirator when ventilation is inadequate.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

Biocidal products regulation

Active substances

Ingredient name
dicopper oxide bis(1-hydroxy-1H-pyridine-2-thionato-O,S)copper

Authorisation number (UK) : HSE No.8848

Authorisation number (Malta) : MSA 2010-04-12-B01a

Authorisation number (Ireland) : PCS No.95614

Directions for use, frequency of application and dose rate

Theoretical Coverage: Airless Spray 5 m²/l @ 75 micron dft

Theoretical Coverage: Brush, Roller 10 m²/l @ 40 micron dft

Restrictions on use : For professional and amateur use.

Application methods: : Application Method: Airless Spray, Brush, Roller.

Recommended Cleaner. : Use Thinner No. 3 for cleaning of paint application equipment.

2.3 Other hazards

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

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	% by weight	Classification		Type
			67/548/EEC	Regulation (EC) No. 1272/2008 [CLP]	
dicopper oxide	EC: 215-270-7 CAS: 1317-39-1 Index: 029-002-00-X	>=35 - <50	Xn; R22 N; R50/53	Acute Tox. 4, H302 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	[1]
xylene	REACH #: 01-2119488216-32 EC: 215-535-7 CAS: 1330-20-7 Index: 601-022-00-9	>=12.5 - <20	R10 Xn; R20/21, R65 Xi; R36/37/38	Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 (Respiratory tract irritation)	[1] [2]
butan-1-ol	REACH #: 01-2119484630-38	>=5 - <7	R10 Xn; R22	Asp. Tox. 1, H304 Flam. Liq. 3, H226 Acute Tox. 4, H302	[1] [2]

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SECTION 3: Composition/information on ingredients

	EC: 200-751-6 CAS: 71-36-3 Index: 603-004-00-6		Xi; R41, R37/38 R67	Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 and H336 (Respiratory tract irritation and Narcotic effects)	
bis(1-hydroxy-1H- pyridine-2-thionato-O, S)copper	EC: 238-984-0 CAS: 14915-37-8	>=3 - <5	T+; R26 Xn; R22 Xi; R41 N; R50	Acute Tox. 4, H302 Acute Tox. 2, H330 Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	[1]
4-methylpentan-2-one	REACH #: 01-2119473980-30 EC: 203-550-1 CAS: 108-10-1 Index: 606-004-00-4	>=3 - <5	F; R11 Xn; R20 Xi; R36/37 R66	Flam. Liq. 2, H225 Acute Tox. 4, H332 Eye Irrit. 2, H319 STOT SE 3, H335 (Respiratory tract irritation)	[1] [2]
Solvent naphtha (petroleum), heavy arom.	REACH #: 01-2119451151-53 EC: 265-198-5 CAS: 64742-94-5 Index: 3.1: 649-424-00-3 3.2: 265-198-5	>=2.5 - <10	Carc. Cat. 3; R40 Xn; R65 R66, R67 N; R51/53	Carc. 2, H351 STOT SE 3, H336 (Narcotic effects) Asp. Tox. 1, H304 Aquatic Chronic 2, H411	[1]
Solvent naphtha (petroleum), light arom.	REACH #: 01-2119486773-24 EC: 265-199-0 CAS: 64742-95-6 Index: 649-356-00-4	>=2.5 - <10	R10 Xn; R65 Xi; R37 R66, R67 N; R51/53	Flam. Liq. 3, H226 STOT SE 3, H335 and H336 (Respiratory tract irritation and Narcotic effects) Asp. Tox. 1, H304 Aquatic Chronic 2, H411 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	[1] [2]
zinc oxide	REACH #: 01-2119463881-32 EC: 215-222-5 CAS: 1314-13-2 Index: 030-013-00-7	>=2.5 - <25	N; R50/53	Aquatic Chronic 2, H411 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	[1]
ethylbenzene	REACH #: 01-2119489370-35 EC: 202-849-4 CAS: 100-41-4 Index: 601-023-00-4	>=1 - <3	F; R11 Xn; R20, R48/20, R65 Xi; R36/37/38	Flam. Liq. 2, H225 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 (Respiratory tract irritation) STOT RE 2, H373 (ears) (inhalation) Asp. Tox. 1, H304	[1] [2]
methanol	EC: 200-659-6 CAS: 67-56-1 Index: 603-001-00-X	<3	F; R11 T; R23/24/25, R39/23/24/25	Flam. Liq. 2, H225 Acute Tox. 3, H301 Acute Tox. 3, H311 Acute Tox. 3, H331 STOT SE 1, H370	[1] [2]

SECTION 3: Composition/information on ingredients

				See Section 16 for the full text of the R-phrases declared above.	See Section 16 for the full text of the H-statements declared above.

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

Type

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

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

SECTION 4: First aid measures

4.1 Description of first aid measures

- General** : In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and seek medical advice.
- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention.
- Inhalation** : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- Skin contact** : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners.
- Ingestion** : If swallowed, seek medical advice immediately and show the container or label. Keep person warm and at rest. Do NOT induce vomiting.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : Harmful if inhaled. May cause respiratory irritation. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
- Skin contact** : Causes skin irritation.
- Ingestion** : Harmful if swallowed. Irritating to mouth, throat and stomach.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
 pain
 watering
 redness

SECTION 4: First aid measures

- Inhalation** : Adverse symptoms may include the following:
 respiratory tract irritation
 coughing
 headache
 drowsiness/fatigue
 dizziness/vertigo
 muscle weakness
 unconsciousness
- Skin contact** : Adverse symptoms may include the following:
 pain or irritation
 redness
 blistering may occur
- Ingestion** : Adverse symptoms may include the following:
 stomach pains

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO₂, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

- Hazards from the substance or mixture** : Highly flammable liquid and vapour. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard. 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 dioxide
 carbon monoxide
 nitrogen oxides
 sulfur oxides
 metal oxide/oxides

5.3 Advice for firefighters

- 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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

- : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

6.3 Methods and 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 the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.

6.4 Reference to other sections

- : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). 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 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.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

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SECTION 7: Handling and storage

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. Vapours are heavier than air and may spread along floors. 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 unlabelled containers. Use appropriate containment to avoid environmental contamination.

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker or exposure or environmental releases.

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
xylene	EH40/2005 WELs (United Kingdom (UK), 12/2011). Absorbed through skin. STEL: 441 mg/m ³ 15 minutes. STEL: 100 ppm 15 minutes. TWA: 220 mg/m ³ 8 hours. TWA: 50 ppm 8 hours.
butan-1-ol	EH40/2005 WELs (United Kingdom (UK), 12/2011). Absorbed through skin. STEL: 154 mg/m ³ 15 minutes. STEL: 50 ppm 15 minutes.
4-methylpentan-2-one	EH40/2005 WELs (United Kingdom (UK), 12/2011). Absorbed through skin. STEL: 416 mg/m ³ 15 minutes. STEL: 100 ppm 15 minutes. TWA: 208 mg/m ³ 8 hours. TWA: 50 ppm 8 hours.
Solvent naphtha (petroleum), light arom.	European Hydrocarbon Solvent Suppliers (CEFIC-HSPA) methodology (Europe). TWA: 100 mg/m ³ 8 hours. (Europe). : 100 mg/m ³ : 19 ppm
ethylbenzene	EH40/2005 WELs (United Kingdom (UK), 12/2011). Absorbed through skin. STEL: 552 mg/m ³ 15 minutes. STEL: 125 ppm 15 minutes. TWA: 441 mg/m ³ 8 hours. TWA: 100 ppm 8 hours.
methanol	EH40/2005 WELs (United Kingdom (UK), 12/2011). Absorbed through skin. STEL: 333 mg/m ³ 15 minutes. STEL: 250 ppm 15 minutes. TWA: 266 mg/m ³ 8 hours. TWA: 200 ppm 8 hours.

SECTION 8: Exposure controls/personal protection

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

No DNELs/DMELs available.

PNECs

No PNECs available

8.2 Exposure controls

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection

Hand protection : Use chemical resistant gloves classified under Standard EN 374: Protective gloves against chemicals and micro-organisms. Recommended: Viton® or Nitrile gloves. When prolonged or frequently repeated contact may occur, a glove with a protection class of 6 (breakthrough time greater than 480 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 2 or higher (breakthrough time greater than 30 minutes according to EN 374) is recommended. The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier. Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.

SECTION 8: Exposure controls/personal protection

- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. 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.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

- Physical state** : Liquid.
- Colour** : Black.
- Odour** : Solvent.
- Odour threshold** : Not available.
- pH** : Not applicable.
- Melting point/freezing point** : Not available.
- Initial boiling point and boiling range** : Lowest known value: 138.85°C (281.9°F) (xylene).
- Flash point** : Closed cup: 21°C
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Not available.
- Upper/lower flammability or explosive limits** : Greatest known range: Lower: 1.4% Upper: 11.3% (butan-1-ol)
- Vapour pressure** : Not available.
- Vapour density** : Not available.
- Relative density** : 1.58
- Solubility(ies)** : Insoluble in the following materials: cold water.
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Viscosity** : Kinematic (room temperature): 117 mm²/s
- Explosive properties** : Not available.
- Oxidising properties** : Not available.

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

- 10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- 10.2 Chemical stability** : The product is stable.
- 10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- 10.4 Conditions to avoid** : Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
- 10.5 Incompatible materials** : Reactive or incompatible with the following materials:
oxidizing materials
- 10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
dicopper oxide	LD50 Oral	Rat	470 mg/kg	-
	LC50 Inhalation Gas.	Rat	5000 ppm	4 hours
xylene	LD50 Oral	Rat	4300 mg/kg	-
	LC50 Inhalation Vapour	Rat	24 mg/l	4 hours
butan-1-ol	LD50 Dermal	Rabbit	3400 mg/kg	-
	LD50 Oral	Rat	790 mg/kg	-
bis(1-hydroxy-1H-pyridine-2-thionato-O,S)copper	LC50 Inhalation Dusts and mists	Rat	70 mg/m ³	4 hours
	LD50 Dermal	Rabbit	>2000 mg/kg	-
4-methylpentan-2-one	LD50 Oral	Rat	1075 mg/kg	-
	LD50 Oral	Rat	2080 mg/kg	-
Solvent naphtha (petroleum), light arom. ethylbenzene	LD50 Oral	Rat	8400 mg/kg	-
	LC50 Inhalation Gas.	Rabbit	4000 ppm	4 hours
	LD50 Dermal	Rabbit	17800 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-

Conclusion/Summary : Not available.

Acute toxicity estimates

Route	ATE value
Oral	1040.8 mg/kg
Dermal	8209 mg/kg
Inhalation (gases)	38367.1 ppm
Inhalation (vapours)	156.1 mg/l
Inhalation (dusts and mists)	1.751 mg/l

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
xylene	Eyes - Mild irritant	Rabbit	-	87 milligrams	-
	Eyes - Severe irritant	Rabbit	-	24 hours 5 milligrams	-
	Skin - Mild irritant	Rat	-	8 hours 60 microliters	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Moderate irritant	Rabbit	-	100 Percent	-

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butan-1-ol	Eyes - Severe irritant	Rabbit	-	24 hours 2 milligrams	-
	Eyes - Severe irritant	Rabbit	-	0.005 Milliliters	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
4-methylpentan-2-one	Eyes - Moderate irritant	Rabbit	-	24 hours 100 microliters	-
	Eyes - Severe irritant	Rabbit	-	40 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
Solvent naphtha (petroleum), heavy arom.	Skin - Mild irritant	Rabbit	-	24 hours 500 microliters	-
	Solvent naphtha (petroleum), light arom.	Rabbit	-	24 hours 100 microliters	-
zinc oxide	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Ethylbenzene	Rabbit	-	500 milligrams	-
ethylbenzene	Eyes - Severe irritant	Rabbit	-	24 hours 15 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 100 milligrams	-
methanol	Eyes - Moderate irritant	Rabbit	-	40 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Skin - Moderate irritant	Rabbit	-		-

Conclusion/Summary : Not available.

Sensitisation

Conclusion/Summary : Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
xylene	Category 3	Not applicable.	Respiratory tract irritation
butan-1-ol	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
4-methylpentan-2-one	Category 3	Not applicable.	Respiratory tract irritation
Solvent naphtha (petroleum), heavy arom.	Category 3	Not applicable.	Narcotic effects
Solvent naphtha (petroleum), light arom.	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
ethylbenzene	Category 3	Not applicable.	Respiratory tract irritation
methanol	Category 1	Not determined	Not determined

Specific target organ toxicity (repeated exposure)

SECTION 11: Toxicological information

Product/ingredient name	Category	Route of exposure	Target organs
ethylbenzene	Category 2	Inhalation	ears

Aspiration hazard

Product/ingredient name	Result
xylene	ASPIRATION HAZARD - Category 1
Solvent naphtha (petroleum), heavy arom.	ASPIRATION HAZARD - Category 1
Solvent naphtha (petroleum), light arom.	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. May cause respiratory irritation. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : Causes skin irritation.

Ingestion : Harmful if swallowed. Irritating to mouth, throat and stomach.

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
headache
drowsiness/fatigue
dizziness/vertigo
muscle weakness
unconsciousness

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

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.

Conclusion/Summary : Not available.

SECTION 11: Toxicological information

General	: No known significant effects or critical hazards.
Carcinogenicity	: Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.
Mutagenicity	: No known significant effects or critical hazards.
Teratogenicity	: No known significant effects or critical hazards.
Developmental effects	: No known significant effects or critical hazards.
Fertility effects	: No known significant effects or critical hazards.

Other information : Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
dicopper oxide	Acute EC50 0.042 mg/l Fresh water	Daphnia - Daphnia similis	48 hours
	Acute IC50 0.71 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	96 hours
	Acute LC50 0.075 mg/l Fresh water	Fish - Danio rerio	96 hours
	Chronic IC10 0.009 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	96 hours
butan-1-ol	Acute EC50 1983 to 2072 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 1910 mg/l Fresh water	Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
bis(1-hydroxy-1H-pyridine-2-thionato-O,S)copper	Acute EC50 0.035 mg/l	Algae - Skeletonems Costatum	72 hours
	Acute EC50 0.022 mg/l Acute LC50 0.0032 mg/l	Crustaceans - Daphnia Magna	48 hours
4-methylpentan-2-one	Acute LC50 537000 to 557000 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Chronic NOEC 78 mg/l Fresh water	Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
Solvent naphtha (petroleum), light arom.	Acute EC50 6.14 mg/m ³	Daphnia - Daphnia magna	21 days
	Acute LC50 9.22 mg/m ³	Daphnia	48 hours
zinc oxide	Acute EC50 0.042 mg/l Fresh water	Fish - Mykiss	96 hours
	Acute EC50 24.6 mg/l	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours
	Acute EC50 1 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute EC50 1 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute IC50 0.17 mg/l	Algae - Selenastrum capricornutum	72 hours
ethylbenzene	Acute LC50 1.1 mg/l	Fish - Oncorhynchus Mykiss	96 hours
	Chronic NOEC 0.017 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours
	Acute EC50 3.6 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute LC50 18.4 to 25.4 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
methanol	Acute LC50 5.1 to 5.7 mg/l Marine water	Fish - Menidia menidia	96 hours
	Acute EC50 16.912 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute EC50 10000000 µg/l Fresh water Acute LC50 2500000 µg/l Marine water	Daphnia - Daphnia magna Crustaceans - Crangon crangon - Adult	48 hours 48 hours

SECTION 12: Ecological information

	Acute LC50 100 mg/l Fresh water	Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
	Chronic NOEC 9.96 mg/l Marine water	Algae - Ulva pertusa	96 hours

Conclusion/Summary : Not available.

12.2 Persistence and degradability

Conclusion/Summary : Not available.

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

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
xylene	3.16	8.1 to 25.9	low
butan-1-ol	0.88	-	low
4-methylpentan-2-one	1.31	-	low
Solvent naphtha (petroleum), heavy arom.	2.8 to 6.5	99 to 5780	high
zinc oxide	-	60960	high
ethylbenzene	3.15	15	low
methanol	-0.77	<10	low

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

PBT : Not applicable.

vPvB : Not applicable.

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

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : The classification of the product may meet the criteria for a hazardous waste.

European waste catalogue (EWC)






Code number	Waste designation
EWC 08 01 11*	waste paint and varnish containing organic solvents or other dangerous substances

Packaging

SECTION 13: Disposal considerations

- Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.
- Special precautions** : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. 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 spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	IMDG	IATA
14.1 UN number	UN1263	UN1263	UN1263
14.2 UN proper shipping name	PAINT	PAINT. Marine pollutant (dicopper oxide)	PAINT
14.3 Transport hazard class(es)	3  	3  	3 
14.4 Packing group	II	II	II
14.5 Environmental hazards	Yes.	Yes.	No.
Additional information	<p>The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.</p> <p>Special provisions 640 (C)</p> <p>Tunnel code (D/E)</p>	<p>The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.</p>	<p>The environmentally hazardous substance mark may appear if required by other transportation regulations.</p>

IMDG Code Segregation group : Not applicable.

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

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions : Not applicable.
**on the manufacture,
 placing on the market
 and use of certain
 dangerous substances,
 mixtures and articles**

Other EU regulations

Special packaging requirements

**Containers to be fitted
 with child-resistant
 fastenings** : Not applicable.

Tactile warning of danger : Yes, applicable.

Product/ingredient name	Carcinogenic effects	Mutagenic effects	Developmental effects	Fertility effects
Solvent naphtha (petroleum), heavy arom.	Carc. 2, H351	-	-	-

IMO : Compliant with the International Convention on the Control of Harmful Antifouling Systems on Ships, 2001.

Type (Antifouling) : Antifouling Type - Organotin-free self-polishing

National regulations

Biocidal products regulation

Product type : PT21 Antifouling products Liquid. Paint.

References : Biocidal Products Regulations 2012
 The Aerosol Dispensers (EEC Requirements) (Amendment) Regulations 1996
 The Detergents Regulations 2005

15.2 Chemical Safety Assessment : This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: Other information

☑ Indicates information that has changed from previously issued version.

Abbreviations and acronyms : ATE = Acute Toxicity Estimate
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
 DMEL = Derived Minimal Effect Level
 DNEL = Derived No Effect Level
 EUH statement = CLP-specific Hazard statement
 PBT = Persistent, Bioaccumulative and Toxic
 PNEC = Predicted No Effect Concentration
 RRN = REACH Registration Number
 vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

SECTION 16: Other information

Classification	Justification
Flam. Liq. 2, H225 Acute Tox. 4, H302 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Dam. 1, H318 Carc. 2, H351 STOT SE 3, H335 (Respiratory tract irritation) Aquatic Acute 1, H400 Aquatic Chronic 1, H410	On basis of test data Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method
Full text of abbreviated H statements :	H225 Highly flammable liquid and vapour. H226 Flammable liquid and vapour. H301 (oral) Toxic if swallowed. H302 Harmful if swallowed. H302 (oral) Harmful if swallowed. H304 May be fatal if swallowed and enters airways. H311 (dermal) Toxic in contact with skin. H312 (dermal) Harmful in contact with skin. H315 Causes skin irritation. H318 Causes serious eye damage. H319 Causes serious eye irritation. H330 Fatal if inhaled. H331 (inhalation) Toxic if inhaled. H332 (inhalation) Harmful if inhaled. H335 (Respiratory tract irritation) May cause respiratory irritation. (Respiratory tract irritation) H335 and H336 (Respiratory tract irritation and Narcotic effects) May cause respiratory irritation. May cause drowsiness or dizziness. (Respiratory tract irritation and Narcotic effects) H336 (Narcotic effects) May cause drowsiness or dizziness. (Narcotic effects) H351 Suspected of causing cancer. H370 Causes damage to organs. H373 (ears) (inhalation) May cause damage to organs through prolonged or repeated exposure if inhaled. (ears) H400 Very toxic to aquatic life. H410 Very toxic to aquatic life with long lasting effects. H411 Toxic to aquatic life with long lasting effects.
Full text of classifications [CLP/GHS] :	Acute Tox. 2, H330 ACUTE TOXICITY (inhalation) - Category 2 Acute Tox. 3, H301 ACUTE TOXICITY (oral) - Category 3 Acute Tox. 3, H311 ACUTE TOXICITY (dermal) - Category 3 Acute Tox. 3, H331 ACUTE TOXICITY (inhalation) - Category 3 Acute Tox. 4, H302 ACUTE TOXICITY (oral) - Category 4 Acute Tox. 4, H312 ACUTE TOXICITY (dermal) - Category 4 Acute Tox. 4, H332 ACUTE TOXICITY (inhalation) - Category 4 Aquatic Acute 1, H400 ACUTE AQUATIC HAZARD - Category 1 Aquatic Chronic 1, H410 LONG-TERM AQUATIC HAZARD - Category 1 Aquatic Chronic 2, H411 LONG-TERM AQUATIC HAZARD - Category 2 Asp. Tox. 1, H304 ASPIRATION HAZARD - Category 1 Carc. 2, H351 CARCINOGENICITY - Category 2 Eye Dam. 1, H318 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 Eye Irrit. 2, H319 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2 Flam. Liq. 2, H225 FLAMMABLE LIQUIDS - Category 2 Flam. Liq. 3, H226 FLAMMABLE LIQUIDS - Category 3 Skin Irrit. 2, H315 SKIN CORROSION/IRRITATION - Category 2 STOT RE 2, H373 (ears) (inhalation) SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (ears) (inhalation) - Category 2 STOT SE 1, H370 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1

SECTION 16: Other information

STOT SE 3, H335 (Respiratory tract irritation)	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
STOT SE 3, H335 and H336 (Respiratory tract irritation and Narcotic effects)	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation and Narcotic effects) - Category 3
STOT SE 3, H336 (Narcotic effects)	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3

Full text of abbreviated R phrases	: R11- Highly flammable. R10- Flammable. R40- Limited evidence of a carcinogenic effect. R26- Very toxic by inhalation. R23- Toxic by inhalation. R23/24/25- Toxic by inhalation, in contact with skin and if swallowed. R39/23/24/25- Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed. R20- Harmful by inhalation. R22- Harmful if swallowed. R20/21- Harmful by inhalation and in contact with skin. R21/22- Harmful in contact with skin and if swallowed. R48/20- Harmful: danger of serious damage to health by prolonged exposure through inhalation. R65- Harmful: may cause lung damage if swallowed. R41- Risk of serious damage to eyes. R37- Irritating to respiratory system. R36/37- Irritating to eyes and respiratory system. R37/38- Irritating to respiratory system and skin. R36/37/38- Irritating to eyes, respiratory system and skin. R66- Repeated exposure may cause skin dryness or cracking. R67- Vapours may cause drowsiness and dizziness. R50- Very toxic to aquatic organisms. R50/53- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Full text of classifications [DSD/DPD]	: F - Highly flammable Carc. Cat. 3 - Carcinogen category 3 T+ - Very toxic T - Toxic Xn - Harmful Xi - Irritant N - Dangerous for the environment
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Notice to reader

IMPORTANT NOTE: the information contained in this data sheet (as may be amended from time to time) is not intended to be exhaustive and is presented in good faith and believed to be correct as of the date on which it is prepared. It is the user's responsibility to verify that this data sheet is current prior to using the product to which it relates.

Persons using the information must make their own determinations as to the suitability of the relevant product for their purposes prior to use. Where those purposes are other than as specifically recommended in this safety data sheet, then the user uses the product at their own risk.

MANUFACTURER'S DISCLAIMER: the conditions, methods and factors affecting the handling, storage, application, use and disposal of the product are not under the control and knowledge of the manufacturer.

SECTION 16: Other information

Therefore the manufacturer does not assume responsibility for any adverse events which may occur in the handling, storage, application, use, misuse or disposal of the product and, so far as permitted by applicable law, the manufacturer expressly disclaims liability for any and all loss, damages and/or expenses arising out of or in any way connected to the storage, handling, use or disposal of the product. Safe handling, storage, use and disposal are the responsibility of the users. Users must comply with all applicable health and safety laws.

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