

H226 Flammable liquid and vapour.
 H302 Harmful if swallowed.
 H315 Causes skin irritation.
 H317 May cause an allergic skin reaction.
 H319 Causes serious eye irritation.
 H410 Very toxic to aquatic life with long lasting effects.

[Prevention]:

P210 Keep away from heat / sparks / open flames / hot surfaces - No smoking.
 P261 Avoid breathing dust / fume / gas / mist / vapours / spray.
 P264 Wash thoroughly after handling.
 P270 Do not eat, drink or smoke when using this product.
 P272 Contaminated work clothing should not be allowed out of the workplace.
 P273 Avoid release to the environment.
 P280 Wear protective gloves / eye protection / face protection.

[Response]:

P301+312 IF SWALLOWED: Call a POISON CENTER or doctor / physician if you feel unwell.
 P302+352 IF ON SKIN: Wash with soap and water.
 P303+361+353 IF ON SKIN (or hair): Remove / Take off immediately all contaminated clothing. Rinse skin with water / shower.
 P305+351+338 IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.
 P312 Call a POISON CENTER or doctor / physician if you feel unwell.
 P321 Specific treatment (see information on this label).
 P330 Rinse mouth.
 P333+313 If skin irritation or a rash occurs: Get medical advice / attention.
 P337 If eye irritation persists:
 P362 Take off contaminated clothing and wash before reuse.
 P363 Wash contaminated clothing before reuse.
 P370 In case of fire:
 P378 Use alcohol resistant foam, CO2, powder, water spray for extinction. Do not use water jet.
 P391 Collect spillage.

[Storage]:

P403+233 Store in a well ventilated place. Keep container tightly closed.

[Disposal]:

P501 Dispose of contents / container in accordance with local / national regulations.

2.3. Other hazards

This product contains no PBT/vPvB chemicals.

3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the Workplace Safety and Health Act.

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes
Copper(i)oxide CAS Number: 0001317-39-1	25- <50	Acute Tox. 4;H302 Aquatic Acute 1;H400 Aquatic Chronic 1;H410	[1]
Zinc oxide CAS Number: 0001314-13-2	10- <25	Aquatic Acute 1;H400 Aquatic Chronic 1;H410	[1][2]
Xylene CAS Number: 0001330-20-7	10- <25	Flam. Liq. 3;H226 Acute Tox. 4;H332 Acute Tox. 4;H312	[1][2]

		Skin Irrit. 2;H315 Asp. Tox. 1;H304 Eye Irrit. 2;H319 STOT SE 3;H335	
Rosin CAS Number: 0008050-09-7	10- <25	Skin Sens. 1;H317	[1][2]
Zineb CAS Number: 0012122-67-7	2.5- <10	STOT SE 3;H335 Skin Sens. 1;H317	[1]
Ethylbenzene CAS Number: 0000100-41-4	2.5- <10	Flam. Liq. 2;H225 Acute Tox. 4;H332 STOT RE 2;H373 Asp. Tox. 1;H304 Skin Irrit. 2;H315 Eye Irrit. 2;H319 STOT SE 3;H335	[1][2]
Carbon black CAS Number: 0001333-86-4	1- <2.5		[1][2]
Amorphous fumed silica CAS Number: 0112945-52-5	1- <2.5		[1]

[1] Substance classified with a health or environmental hazard.

[2] Substance with a workplace exposure limit.

[3] PBT-substance or vPvB-substance.

*The full texts of the Hazard (H) phrases are shown in Section 16.

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 do not require reporting in this 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.

Inhalation

Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious place in the recovery position and obtain immediate medical attention. Give nothing by mouth.

Skin Contact

Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognised skin cleanser. Do NOT use solvents or thinners.

Eye Contact

Irrigate copiously with clean fresh water for at least 10 minutes, holding the eyelids apart and seek medical attention.

Ingestion

If accidentally swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

4.2. Most important symptoms and effects, both acute and delayed

No data available

4.3. Indication of any immediate medical attention and special treatment needed

No data available

5. Fire-fighting measures

5.1. Extinguishing media

Recommended extinguishing media; alcohol resistant foam, CO₂, powder, water spray.

Do not use - water jet.

Note; Fire will produce dense black smoke. Decomposition products may be hazardous to health. Avoid exposure and use breathing apparatus as appropriate.

Cool closed containers exposed to fire by spraying them with water. Do not allow run off water and contaminants from fire fighting to enter drains or water courses.

5.2. Special hazards arising from the substance or mixture

Fire will produce dense black smoke. Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

Avoid exposure and use breathing apparatus as appropriate.

5.3. Advice for fire-fighters

Cool closed containers exposed to fire by spraying them with water. Do not allow run off water and contaminants from fire fighting to enter drains or water courses.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Remove sources of ignition, do not turn lights or unprotected electrical equipment on or off. In case of a major spill or spillage in a confined space evacuate the area and check that solvent vapour levels are below the Lower Explosive Limit before re-entering. Ventilate the area and avoid breathing vapours. Take the personal protective measures listed in section 8.

6.2. Environmental precautions

Do not allow spills to enter drains or watercourses.

6.3. Methods and material for containment and cleaning up

Ventilate the area and avoid breathing vapours. Take the personal protective measures listed in section 8.

Contain and absorb spillage with non-combustible materials e.g. sand, earth, vermiculite. Place in closed containers outside buildings and dispose of according to the Waste Regulations. (See section 13).

Clean, preferably with a detergent. Do not use solvents.

Do not allow spills to enter drains or watercourses.

If drains, sewers, streams or lakes are contaminated, inform the local water company immediately. In the case of contamination of rivers, streams or lakes the Environmental Protection Agency should also be informed.

7. Handling and storage

7.1. Precautions for safe handling

Handling

This coating contains solvents. Solvent vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air. Areas of storage, preparation and application should be ventilated to prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentrations higher than the occupational exposure limits.

In Storage

Handle containers carefully to prevent damage and spillage.

Naked flames and smoking should not be permitted in storage areas. It is recommended that fork lift trucks and electrical equipment are protected to the appropriate standard.

This coating contains solvents. Solvent vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air. Areas of storage, preparation and application should be ventilated to prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentrations higher than the occupational exposure limits.

7.2. Conditions for safe storage, including any incompatibilities

Keep away from the following materials: oxidising agents, strong alkalis, strong acids.

Avoid skin and eye contact. Avoid inhalation of vapours and spray mists. Observe label precautions. Use personal protection as shown in section 8.

Smoking, eating and drinking should be prohibited in all preparation and application areas.

Never use pressure to empty a container; containers are not pressure vessels.

This is a flammable liquid. Refer to the requirements of SS 532:2007 (The Storage of Flammable Liquids).

There are no exposure scenarios, see details in section 1.

7.3. Specific end use(s)

Store in a well ventilated, dry place away from sources of heat and direct sunlight.

Store on concrete or other impervious floor, preferably with bunding to contain any spillage. Do not stack more than 3 pallets high.

Keep container tightly closed. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep in the original container or one of the same material.

Prevent unauthorised access.

All sources of ignition (hot surfaces, sparks, open flames etc) should be excluded from areas of preparation and application. All electrical equipment (including torches) should be protected (Ex) to the appropriate standard.

The product may charge electrostatically. Always use earthing leads when pouring solvents and transferring product. Operators should wear clothing which does not generate static (at least 60% natural fibre) and antistatic footwear; floors should be of conducting type.

8. Exposure controls and personal protection

8.1. Control parameters

From the listed Exposure Standards for Atmospheric Contaminants given in the Workplace Safety and Health(General Provisions) Regulations.

Material	PEL (Short Term)		PEL (Long Term)		Comments
	ppm	mg/m ³	ppm	mg/M3	
Carbon black	-	-	-	3.5	
Ethylbenzene	125	543	100	434	
Iron oxide	-	-	-	5	
Xylene	150	651	100	434	
Zinc oxide	-	-	-	10	

(P) Peak exposure limit

(R) Suppliers Recommended Limit

(Sk) There is a risk of absorption through unbroken skin

(Sen) Sensitiser

(Cat1) Category 1 - established human carcinogen

(Cat2) Category 2 - probable human carcinogen

(Cat3) Category 3 - substances suspected of having carcinogenic potential

DNEL/PNEC values

No Data Available

8.2. Exposure controls

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapour below occupational exposure limits suitable respiratory protection must be worn.

Eye Protection

Wear safety eyewear, e.g. safety spectacles, goggles or visors to protect against the splash of liquids. Eyewear should comply with the appropriate standard.

Wear a full face shield if mixing or pouring operations pose a risk of splashes.

An eyewash station is suggested as a good work place practice.

Skin Protection

Gloves of an appropriate material should be worn during mixing and application.

Other

Overalls which cover the body, arms and legs should be worn. Skin should not be exposed. Barrier creams may help to protect areas which are difficult to cover such as the face and neck. They should however not be applied once exposure has occurred. Petroleum jelly based types such as Vaseline should not be used. All parts of the body should be washed after contact.

Respiratory Protection

When concentrations exceed the exposure limits shown above workers must wear appropriate approved respirators. Provision of other controls such as exhaust ventilation should be considered if practical.

Thermal hazards

No Data Available

9. Physical and chemical properties

Colour	Brown Liquid
Odour	Smell of Solvent
Odour threshold	Not Measured
pH	N/A
Melting point / freezing point (°C)	Not Measured
Initial boiling point and boiling range (°C)	110
Flash Point (C)	26
Evaporation rate (Ether = 1)	Not Measured
Flammability (solid, gas)	Not Applicable
Upper/lower flammability or explosive limits	Lower Explosive Limit: 1.1 (Xylene) Upper Explosive Limit: 6.6 (Xylene)
Vapour pressure (Pa)	Not Measured
Vapour Density	Heavier than air.
Specific Gravity	1.86
Solubility in Water	Immiscible
Partition coefficient n-octanol/water (Log Kow)	Not Measured

Autoignition Temperature (C)	Not Measured
Decomposition temperature	Not Measured
Viscosity (cSt)	N/A

9.2. Other information

No further information

10. Stability and reactivity

10.1. Reactivity

No data available

10.2. Chemical stability

Stable under recommended storage and handling conditions (see section 7). When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide, carbon dioxide, oxides of nitrogen and smoke.

Keep away from oxidising agents, strongly alkaline and strongly acid materials in order to avoid possible exothermic reactions.

10.3. Possibility of hazardous reactions

May react exothermically with: oxidising agents, strong alkalis, strong acids.

10.4. Conditions to avoid

Stable under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

Keep away from the following materials: oxidising agents, strong alkalis, strong acids.

10.6. Hazardous decomposition products

Fire will produce dense black smoke. Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

Avoid exposure and use breathing apparatus as appropriate.

11. Toxicological information

Acute toxicity

Exposure to solvent vapour concentrations from the component solvents in excess of the stated occupational exposure limits 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 include headache, nausea, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.

Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in dryness, irritation and possible non-allergic contact dermatitis. Solvents may also be absorbed through the skin. Splashes of liquid in the eyes may cause irritation and soreness with possible reversible damage.

The preparation has been assessed using the Acute Toxicity Data listed below, and classified for toxicological hazards accordingly. See section 2 for details.

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapour LD50, mg/L/4hr	Inhalation Dust/Mist LD50, mg/L/4hr
Amorphous fumed silica - (112945-52-5)	3,160.00, Rat	Not Available	Not Available	Not Available
Carbon black - (1333-86-4)	8,000.00, Rat	Not Available	Not Available	Not Available
Copper(i)oxide - (1317-39-1)	470.00, Rat	2,000.00, Rabbit	Not Available	50.00, Rat

Ethylbenzene - (100-41-4)	3,500.00, Rat	15,433.00, Rabbit	17.20, Rat	Not Available
Rosin - (8050-09-7)	7,600.00, Rat	2,500.00, Rabbit	Not Available	Not Available
Xylene - (1330-20-7)	4,299.00, Rat	1,548.00, Rabbit	Not Available	20.00, Rat
Zinc oxide - (1314-13-2)	5,000.00, Rat	Not Available	Not Available	2.50, Mouse
Zineb - (12122-67-7)	2,000.00, Rat	2,000.00, Rabbit	Not Available	5.00, Rat

Item	Category	Hazard
Acute Toxicity (mouth)	4	Harmful if swallowed.
Acute Toxicity (skin)	Not Classified	Not Applicable
Acute Toxicity (inhalation)	Not Classified	Not Applicable
Skin corrosion/irritation	2	Causes skin irritation.
Eye damage/irritation	2	Causes serious eye irritation.
Sensitization (respiratory)	Not Classified	Not Applicable
Sensitization (skin)	1	May cause an allergic skin reaction.
Germ toxicity	Not Classified	Not Applicable
Carcinogenicity	Not Classified	Not Applicable
Reproductive Toxicity	Not Classified	Not Applicable
Specific target organ systemic toxicity (single exposure)	Not Classified	Not Applicable
Specific target organ systemic Toxicity (repeated exposure)	Not Classified	Not Applicable
Aspiration hazard	Not Classified	Not Applicable

12. Ecological information

12.1. Toxicity

The preparation has been assessed according to the GHS criteria and is classified as dangerous for the environment, using the toxicity data listed below.

There are no data available on the product itself.

The product should not be allowed to enter drains or water courses.

Aquatic Ecotoxicity

Ingredient	96 hr LC50 fish, mg/l	48 hr EC50 crustacea, mg/l	ErC50 algae, mg/l
Copper(i)oxide - (1317-39-1)	0.075, Danio rerio	0.042, Daphnia similis	0.03 (96 hr), Pseudokirchneriella subcapitata
Zinc oxide - (1314-13-2)	1.10, Oncorhynchus mykiss	0.098, Daphnia magna	0.042 (72 hr), Pseudokirchneriella subcapitata
Xylene - (1330-20-7)	Not Available	Not Available	Not Available
Rosin - (8050-09-7)	1.00, Danio rerio	10.00, Daphnia magna	100.00 (72 hr), Selenastrum capricornutum
Zineb - (12122-67-7)	7.20, Poecilia reticulata	0.97, Daphnia magna	0.5272 (96 hr), Chlorella pyrenoidosa
Ethylbenzene - (100-41-4)	4.20, Oncorhynchus mykiss	2.93, Daphnia magna	3.60 (96 hr), Pseudokirchneriella subcapitata
Carbon black - (1333-86-4)	1,000.00, Danio rerio	5,600.00, Daphnia magna	10,000.00 (72 hr), Scenedesmus subspicatus

Amorphous fumed silica - (112945-52-5)

Not Available

Not Available

Not Available

12.2. Persistence and degradability

There is no data available on the preparation itself.

12.3. Bioaccumulative potential

Not Measured

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

This product contains no PBT/vPvB chemicals.

12.6. Other adverse effects

No data available

13. Disposal considerations

13.1. Waste treatment methods

Do not allow into drains or water courses. Wastes and empty containers should be disposed of in accordance with local regulations.

Using information provided in this data sheet advice should be obtained from the local Waste Regulation Authority as to whether special waste regulations apply.

14. Transport information

14.1. UN number 1263

14.2. UN proper shipping name Paint

14.3. Transport hazard class(es)

Road and Rail Transport 1263, Paint, 3, III, 3[Y]

IMDG reference : Class/Div 3 Sub Class

Ems F-E,S-E

ICAO/IATA Class 3 Sub Class

14.4. Packing group III

14.5. Environmental hazards

Road and Rail Transport Environmentally Hazardous: Yes

IMDG reference : Marine Pollutant: Yes (Copper(i)oxide)

14.6. Special precautions for user
No further information

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not Applicable

15. Regulatory information

This product and all its components complies with the chemical and transport regulations from the country listed in section 1.3.

Other regulatory information specific to the hazardous chemical(s):

None noted.

16. Other information

This product complies with IMO Antifouling Systems Convention (AFS 2001).

Antifouling Type - Organotin-free conventional.

Active Ingredients -

Copper (7440-50-8) 11 g/l

Zineb (12122-67-7) 131.8 g/l

Copper oxide (1317-38-0) 16.5 g/l

Dicopper oxide (1317-39-1) 522.54 g/l

The information on this SDS is based upon the present state of our knowledge and on current laws. The product should not be used for purposes other than shown in the product data sheet without first obtaining written advice.

It is always the responsibility of the user to take all necessary steps to meet the demands of applicable legislation.

The full text of the phrases appearing in section 3 is:

H226 Flammable liquid and vapour.

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

H336 May cause drowsiness and dizziness.

H372 Causes damage to organs through prolonged or repeated exposure.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

**This SDS is valid for 5 years from the revised date on page 1.
The revision date is in American format (e.g. MM/DD/YY).**

End of document



All information concerning this product and/or suggestions for handling and use contained herein are offered in good faith and are believed to be reliable. Akzo Nobel however makes no warranty as to the accuracy of and/or sufficiency of such information.