

Philadelphia Coatings LLC

Americas Office: 6 Georgian Row, The Woodlands, Texas, TX 77380, USA

Tel: +1 832-948-5588

E-mail: info@philacoatings.com

Website: www.philacoatings.com



Safety Data Sheet

1. Chemicals and enterprise identification

Product name and code: **PROTON Copper-Free**

Application of the substance: **Antifouling**

Product use: **Coating-Solvent type**

Colors: **Pink, Light Red, Oxide Red, Brown**

Application Method: **For professional use only**

Supplier/manufacturer: **Philadelphia Coatings LLC**

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Chemical emergency response numbers: 1-800-255-3924 for Domestic and +1-813-248-0585 for International.

Shipments of hazardous materials within the listed countries should reference ChemTel's in-county phone numbers:

Australia: 1-300-954-583, Brazil: 0-800-591-6042, China: 400-120-0751, India: 000-800-100-4086, Mexico: 01-800-099-0731

2. Hazards identification

The product is classified as hazardous pursuant to the provisions set forth in EC Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of EC Regulation 1907/2006 (REACH), Annex II and subsequent amendments. Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Pictograms:



Signal word: Danger

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Hazard classification (GHS) and indication:

Flammable liquids	Category 2	H225	High flammable liquid and vapour
Flammable liquids	Category 3	H226	Flammable liquid and vapour
Aspiration hazard	Category 1	H304	May be fatal if swallowed and enters airways
Acute toxicity/Inhalation	Category 2	H330	Fatal if inhaled
Acute toxicity Oral/Dermal	Category 4	H302, H312	Harmful if swallowed Harmful in contact with skin
Acute toxicity/Inhalation (Dust and Mists)	Category 4	H332	Harmful if inhaled
Skin corrosion/irritation	Category 2	H315	Causes skin irritation
Serious eye damage/eye irritation	Category 2	H319	Causes serious eye irritation
Skin sensitizers	Category 1	H317	May cause an allergic skin reaction
Serious eye damage/eye irritation	Category 1	H318	Causes serious eye damage
Specific target organ toxicity, single exposure	Category 3	H335, H336	May cause respiratory irritation. May cause drowsiness or dizziness
Specific target organ toxicity, repeated exposure	Category 2 (hearing organs)	H373	May cause damage to organs through prolonged or repeated exposure
Aquatic environmental hazards/Acute	Category 1	H400	Very toxic to aquatic life
Aquatic environmental hazard/Long-term	Category 1	H410	Very toxic to aquatic life with long lasting effects
Aquatic environmental hazard/Long-term	Category 2	H411	Toxic to aquatic life with long lasting effects

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3. Ingredient/composition information

Ingredient	Notes	Cas number	EC number	% by weight	Classification
Cuprous oxide	-	1317-39-1	215-270-7	25-50	Acute Tox. 4, H302 , Acute Tox. 4, H332 , Eye Dam. 1, H318 , Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Zinc oxide (ZnO)	-	1314-13-2	215-222-5	2.5-20	Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Copper, bis(1,hydroxy-2(1H)-pyridinethionato O,S) - (Pyrithion)	-	14915-37-8	238-984-0	2-3	H302, H330, H318, Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Xylene	C	1330-20-7	215-535-7	10-25	Flam. Liq. 3, H226 , Acute Tox. 4, H312 , Acute Tox. 4, H332 , Skin. Irrit. 2, H315 Eye Irrit. 2, H319
Preventol A6	-	56449-18-4	-	0.05<x<0.15 (non active)	Skin Sens. 1, H317
Rosin	-	8050-09-7	232-475-7	2.5-10	Skin Sens. 1, H317
Ethylbenzene	-	100-41-4	202-849-4	2.5-10	Flam. Liq. 2, H225 Acute Tox. 4, H332 STOT RE 2, H373 (hearing organs) Asp. Tox. 1, H304
Solvent naphtha petroleum Light aroma	H-P	64742-95-6	265-199-0	2.5-10	Flam. Liq. 3, H226 STOT SE 3, H335 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
1-methoxy-2-propanol	-	107-98-2	203-539-1	2.5-10	Flam. Liq. 3, H226 STOT SE 3, H336

Nota Bene: Depending on local raw material and toxicant availability manufacturer reserves right without prejudice to use suitable variants on same.

Components not listed are not physical or health hazards as defined in 29 CFR 1910.1200 (Hazard Communication Standard).

4. 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.

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Eye contact: Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open.

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.

Inhalation: Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

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

5. Fire-fighting measures

Extinguishing media: Recommended: alcohol-resistant foam, CO₂, powders, water spray.

Extinguishing media not to be used: Do not use water jet.

Recommendations: Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard. Appropriate breathing apparatus may be required. Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or watercourses.

6. Accidental release measures

Personal precautions: Exclude sources of ignition and ventilate the area. Avoid breathing vapor or mist. Refer to protective measures listed in sections 7 and 8. 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).

Spill: Preferably clean with a detergent. Avoid using solvents.

Note: See section 8 for personal protective equipment and section 13 for waste disposal.

7. Handling and storage

Handling: Vapors are heavier than air and may spread along floors. Vapors may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapors in air and avoid vapor concentrations higher than the occupational exposure limits.

To dissipate static electricity during transfer, earth drums and connects to receiving container with bonding strap.

Operators should wear antistatic footwear and clothing and floors should be of the conducting type. In addition, the product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard.

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Put on appropriate personal protective equipment (see section 8).

Never use pressure to empty. Container is not a pressure vessel. Always keep in containers made from the same material as the original one. Comply with the health and safety at work laws.

When operators, whether spraying or not, must work inside the spray booth, ventilation is unlikely to be enough to control particulates and solvent vapor in all cases. In such circumstances they should wear a compressed air-fed respirator during the spraying process and until the particulates and solvent vapor concentration has fallen below the exposure limits.

Keep container tightly closed. Keep away from heat, sparks and flame. No sparking tools should be used.

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Storage: Store in accordance with local regulations. Observe label precautions.

Store in a dry, cool and well-ventilated area.

Keep away from heat and direct sunlight. No smoking. Prevent unauthorized access.

Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Do not empty into drains.

Keep away from sources of ignition.

Keep away from oxidizing agents, strong alkalis, strong Acids.

8. Exposure controls/personal protection

Engineering measures: 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 enough to maintain concentrations of particulates and solvent vapors below the OEL, suitable respiratory protection must be worn.

Ingredient name & Occupational exposure limits

Xylene:

EH40/2005 WELs (12/2011). Absorbed through skin.

STEL: 441 mg/m³ 15 minute(s).

STEL: 100 ppm 15 minute(s).

TWA: 220 mg/m³ 8 hour(s).

TWA: 50 ppm 8 hour(s).

Ethyl benzene:

EH40/2005 WELs (12/2011). Absorbed through skin.

STEL: 552 mg/m³ 15 minute(s).

STEL: 125 ppm 15 minute(s).

TWA: 100 ppm 8 hour(s).

TWA: 441 mg/m³ 8 hour(s).

1-methoxy-2-propanol:

EH40/2005 WELs (12/2011). Absorbed through skin.

STEL: 560 mg/m³ 15 minute(s).

STEL: 150 ppm 15 minute(s).

TWA: 375 mg/m³ 8 hour(s).

TWA: 100 ppm 8 hour(s).

Copper, bis(1,hydroxy-2(1H)-pyridinethionato O,S):

Arch Chemicals (Europe, 2002).

TWA: 0.35 mg/m³ 8 hour(s).

Solvent naphtha (petroleum), light aroma:

EH40-WEL (12/2011).

TWA: 125 mg/m³ 8 hour(s). Form: All forms

TWA: 25 ppm 8 hour(s). Form: All forms

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Personal protective equipment

Skin and body: Personnel should wear antistatic clothing made of natural fibers or of high-temperature-resistant synthetic fibers.

Hands: Wear suitable gloves. Recommended, gloves (breakthrough time) > 8 hours: flour rubber, polyvinyl alcohol (PVA), nitrile rubber, 4H, Teflon.

Not recommended, gloves (breakthrough time) < 1 hour: neoprene, butyl rubber, PVC

For right choice of glove materials, with focus on chemical resistance and time of penetration, seek advice by the supplier of chemical resistant gloves.

The user must check that the final choice of type of glove selected for handling this product is the most appropriate and considers the conditions of use, as included in the user's risk assessment.

Eyes: Use safety eyewear designed to protect against splash of liquids.

Respiratory system: If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use respiratory mask with charcoal and dust filter when spraying this product (as filter combination A2-P3).

In confined spaces, use compressed-air or fresh-air respiratory equipment. When use of roller or brush, consider use of charcoal filter.

9. Physical and chemical properties

Physical state: Liquid.

Odor: Characteristic.

Color: Various colors.

Flash point: Closed cup: 28°C (82,4°F)

Density: 1.8 g/cm³

Explosion limits: 1.1 - 13.7%

Solubility: Insoluble in the following materials: cold water and hot water.

10. Stability and reactivity

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

Hazardous decomposition products: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

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

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11. Ecological information

Aquatic eco toxicity

Product/ingredient name	Test	Result	Species	Exposure
Cuprous oxide	Mortality	Acute EC50 0,042 mg/L Fresh water	Daphnia -Water flea - Daphnia similis-6 to 24 hours	48 hours
	Mortality	Acute LC50 0,075 mg/L Fresh water	Fish - Zebra danio - Danio rerio	96 hours
Copper, bis(1,hydroxy-2(1H)-pyridinethionato O,S) - (Pyrithion)	Intoxication	Acute EC50 0.022 mg/l	Daphnia	48 hours
		Acute LC50 0.0032 mg/l	Fish	96 hours
Zinc oxide (ZnO)	Intoxication	Acute EC50 >1000 ppm Fresh water	Daphnia -Water flea - Daphnia magna - <24 hours	48 hours
	Mortality	Acute LC50 1,1 to 2,5 ppm Fresh water	Fish - Rainbow trout, Donaldson trout - Oncorhynchus, Mykiss	96 hours
Xylene	Mortality	Acute LC50 12000 to 16114 ug/L Fresh water	Fish - Bluegill - Leprosies macrochirus - 1,1 g	96 hours
Ethyl benzene	Population	Acute EC50 7,2 mg/L	Algae	48 hours
	Intoxication	Acute EC50 2,93 mg/L	Daphnia	48 hours
	Mortality	Acute LC50 4,2 mg/L	Fish	96 hours
Solvent naphtha (petroleum), Light aroma	-	Acute EC50 <6.14 mg/L	Daphnia - Daphnia magna	48 hours
	-	Acute LC50 <2.60 mg/L	Algae - Pseudokirchneriella subcapitata (green algae)	96 hours
	-	Acute LC50 <9.22 mg/L	Fish - Oncorhynchus mykiss (rainbow trout)	96 hours

Ecological information

Biodegradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Cuprous oxide	-	-	Not readily
Xylene	-	-	Readily
Zinc oxide (ZnO)	-	-	Not readily
Ethyl benzene	-	-	Readily
Solvent naphtha (petroleum), Light aroma	-	-	Readily

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Bio accumulative potential

Product/ingredient name	LogKow	BCF	Potential
Xylene	3.12	8.1 to 25.9	Low
Rosin	1.9 – 7.7	-	High
Zinc oxide (ZnO)	-	60960	High
Ethylbenzene	3.6	-	Low
1-methoxy-2-propanol	<1	-	Low
Solvent naphtha (petroleum), light aroma	-	10 - 2500	High

12. Toxicological information

There is no data available on the preparation itself. The preparation has been assessed following the conventional method of the EC Regulation 1272/2008 (CLP) (and subsequent amendments and supplements) and classified for toxicological hazards accordingly. See sections 2 and 15 for details.

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. Solvents may cause some of the above effects by absorption through the skin.

Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness in extreme cases and loss of consciousness. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. If splashed in the eyes, the liquid may cause irritation and reversible damage. Swallowing may cause nausea, diarrhea, vomiting, gastro-intestinal irritation and chemical pneumonia.

Contains: Solvent naphtha (petroleum), light aroma, xylene, rosin. May produce an allergic reaction.

Product/ingredient name	Result	Species	Exposure
Xylene	Acute LC50 (Inhalation) 20 mg/l	Rat	4 hours
	LD50 (Oral) 4300 mg/kg	Rat	4 hours
	TDL _o (Dermal) 4300 mg/kg	Rabbit	4 hours
Solvent naphtha (petroleum), light aroma	LC50 (Inhalation) 6193 mg/m ³	Rat	4 hours
	LD50 (Dermal) 3160 mg/kg	Rabbit	4 hours
	LD50 (Oral) 3492 mg/kg	Rat	4 hours
Ethyl benzene	Acute LC50 (Inhalation) 29.08 mg/l	Rabbit	4 hours
LD50 (Oral) 1700 mg/kg			

13. Disposal considerations

Do not allow to enter drains or watercourses. Material and/or container must be disposed of as hazardous waste.

European waste catalogue (EWC): 08 01 11* waste paint and varnish containing organic solvents or other dangerous substances.

If this product is mixed with other wastes, this code may no longer apply. If mixed with other wastes, the appropriate code should be assigned. For further information, contact your local waste authority.

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CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

14. Transport information

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.

International transport regulations

Proper shipping name: Paint

UN Number: 1263

Class: 3

Packing group: III

Labels:



Marking:



The environmental hazardous / marine pollutant mark is only applicable for packages containing more than 5 liters for liquids and 5 kg for solids.

Additional information

Environmental hazards:

ADR / RID: Environmentally hazardous

IMDG: Marine Pollutant

IATA: No

Special precautions:

ADR / RID: HIN – Kemler: 33

Tunnel restriction code: (D/E)

Special Provision: 640D

IMDG: Emergency schedules (EMS): F-E, S-E

IATA: Packaging instructions: 364

Special Instructions: A3, A72, A192

Transport in accordance with ADR/RID, IMDG and IATA and national regulation.

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15. Regulatory information

EU regulations: The product is classified and labeled for supply in accordance with EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorization

Substances of very high concern

None of the components are listed.

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

Other EU regulations

Europe inventory: At least one component is not listed

Black List Chemicals: Not listed

Priority List Chemicals: Not determined

Industrial emissions (integrated pollution prevention and control) – Air: Listed

Industrial emissions (integrated pollution prevention and control) – Water: Not listed

Additional information: IMO Antifouling System Convention compliant (AFS/CONF/26)

This product does not contain organ tin compounds acting as biocides and complies with the International Convention on the Control of Harmful Anti-fouling Systems on Ships as adopted by IMO in October 2001 (IMO document AFS/CONF/26).

Industrial use: The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation. The provisions of the national health and safety at work regulations apply to the use of this product at work.

16. Other information

Abbreviations and acronyms:

ATE = Acute Toxicity Estimate

CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]

EUH statement = CLP-specific Hazard statement

RRN = REACH Registration Number

CEPE Classification: 1

Full text of abbreviated H statements referred to in sections 2 and 3:

H225 Highly flammable liquid and vapor

H226 Flammable liquid and vapor

H302 Harmful if swallowed

H304 May be fatal if swallowed and enters airways

H312 Harmful in contact with skin

H315 Causes skin irritation

H317 May cause an allergic skin reaction

H318 Causes serious eye damage

H319 Causes serious eye irritation

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H330 Fatal if inhaled

H332 Harmful if inhaled

H335 May cause respiratory irritation

H336 May cause drowsiness or dizziness

H373 (hearing organs) May cause damage to organs through prolonged or repeated exposure. (hearing organs)

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. 4, H302 ACUTE TOXICITY (oral) - Category 4

Acute Tox. 4, H312 ACUTE TOXICITY (dermal) - Category 4

Acute Tox. 2, H330 ACUTE TOXICITY (inhalation) - Category 2

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

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

Skin Sens. 1, H317 SKIN SENSITIZATION - Category 1

STOT RE 2, H373 (hearing organs) SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

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

STOT SE 3, H336 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3

This Safety Data Sheet is prepared in accordance with according to Regulation (EC) No. 1272/2008 [CLP/GHS].

Notice To Whom It May Concern:

Your attention and information in this MSDS are based on the present state of our knowledge and on current laws. The product is not to be used for purposes other than those specified under section 1 without first obtaining written handling instructions. It is always the responsibility of the user to take all necessary steps to fulfill the demands set out in the local rules and legislation. The information in this SDS is meant to be a description of the safety requirements for our product. It is not to be considered a guarantee of the product's properties.