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Material Safety Data Sheet

COPPER (II) HYDROXIDE

Section 1 - Product Identification

Product Name : Copper (II) Hydroxide
CAS No. : 20427-59-2
Synonym : Cupric hydroxide
Company Identification : Tradeasia International Pte. Limited
Address :
133 Cecil Street # 12-03 Keck Seng Tower, Singapore
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Email: contact@chemtradeasia.com

Section 2 – Composition/Information on Ingredients

Substances

Name of substance	Copper (II) Hydroxide
Identifiers	
CAS No	20427-59-2
Molecular formula	H2CuO2
Molar Mass	97.561 g/mol

Section 3 – Hazardous Ingredients & Occupational Exposure Limits

3.1 Emergency Overview

OSHA Hazards

Target Organ Effect, Harmful by ingestion., Irritant

Target Organs Kidney, Liver, Central nervous system

GHS Classification

Acute toxicity, Oral (Category 4)

Acute toxicity, Dermal (Category 5)

Serious eye damage (Category 1)

3.2 GHS Label elements, including precautionary statements

Pictogram 

Signal word - Danger

Hazard statement(s)

H302 Harmful if swallowed.

H313 May be harmful in contact with skin.

H318 Causes serious eye damage.

Precautionary statement(s)

P280 Wear protective gloves/ eye protection/ face protection.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

3.3 Potential Health Effects

Inhalation. May be harmful if inhaled. Causes respiratory tract irritation.

Skin. Harmful if absorbed through skin. Causes skin irritation.

Eyes. Causes eye irritation.

Ingestion. Harmful if swallowed.

Section 4 – First-Aid Measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled, move person into fresh air. If not breathing, give artificial respiration. Consult a physician. In case of skin contact Wash off with soap and plenty of water. Consult a physician.

In case of eye contact, rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed, never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Section 5 – Employee Protection

Extinguishing Media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. There are no limitations of extinguishing agents are given.

Special hazards arising from the substance or mixture: Copper oxides are not combustible. Ambient fire may liberate hazardous vapours.

Advice for firefighters: Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information: Prevent fire extinguishing water from contaminating surface water or the ground water system.

Section 6 – Accidental Release Measures

Personal precautions

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

Environmental precautions

Do not let product enter drains.

Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

Section 7 – Handling and Storage

Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed.

Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place.

Keep in a dry place. Keep in a dry place.

Section 8 – Exposure Controls/Personal Protection (later)

Components with workplace control parameters.

Copper dihydroxide

Value: TWA

Control Parameters: 1 mg/m3

Basis: USA. NIOSH Recommended Exposure Limits.

Personal protective equipment

Respiratory protection. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection. Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection. Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection. Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday

Section 9 – Physical and Chemical Properties

Information on basic physical and chemical properties

Physical State - Solid

Appearance – Powder Form

Odor - Odorless

Odor Threshold - No information available

pH - No information available

Melting Point/Range - No data available

Boiling Point/Range - No information available

Flash Point - No information available

Evaporation Rate - Not applicable

Flammability (solid,gas) - No information available

Flammability or explosive limits

Upper - No data available

Lower - No data available

Vapor Pressure - No information available

Vapor Density - Not applicable

Specific Gravity - No information available

Solubility - 2.9 g/l

Partition coefficient; n-octanol/water - No data available

Autoignition Temperature

Decomposition Temperature - No information available

Viscosity - Not applicable

Section 10 – Stability and Reactivity

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

no data available

Conditions to avoid

no data available

Materials to avoid

Strong acids

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Copper oxides

Other decomposition products - no data available

Section 11 – Toxicological Information

Unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

Toxicity

Oral (None) None: human LDL0 200 mg/kg

Oral (rat) LD50: 1000 mg/kg

Dermal (rabbit) LD50: >3160 mg/kg

Oral (quail) LD50: 3400 mg/kg

Oral (duck) LD50: >5000 mg/kg

Inhalation (mammal) LC50: >2000 mg/m^3

Irritation

None reported

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

No data available

Teratogenicity - No data available

Specific target organ toxicity - No data available

Specific target organ toxicity - No data available

Aspiration hazard - No data available

Potential health effects

Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.

Ingestion: Harmful if swallowed.

Skin: Harmful if absorbed through skin. Causes skin irritation.

Eyes: May cause eye irritation.

Signs and Symptoms of Exposure

Symptoms of systemic copper poisoning may include capillary damage, headache, cold sweat, weak pulse, and kidney and liver damage, central nervous system excitation followed by depression, jaundice, convulsions, paralysis, and coma. Death may occur from shock or renal failure. Chronic copper poisoning is typified by hepatic cirrhosis, brain damage and demyelination, kidney defects, and copper deposition in the cornea as exemplified by humans with Wilson's disease. It has also been reported that copper poisoning has led to hemolytic anemia and accelerates arteriosclerosis.

Synergistic effects - no data available

Additional Information - RTECS: GL7600000

Section 12 – Ecological Information

Toxicity. No Data Available.
Persistence and degradability. No Data Available.
Bioaccumulative potential. No Data Available.
Mobility in soil. No Data Available.
Results of PBT and vPvB assessment. This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
Other adverse effects. No Data Available.

Section 13 – Disposal Considerations

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

Section 14 – Transport Information

DOT/TDG/IATA/IMDG/IMO
UN: UN3288
Proper shipping name: Toxic solid, inorganic, n.o.s.
Technical Name: Copper hydroxide
Hazard Class: 6.1
Packing group: II

Section 15 – Regulatory Information

1. US Federal regulations

Listed on the United States TSCA (Toxic Substances Control Act) inventory
Copper (II) Hydroxide is subject to the reporting requirements of sections 313 as a chemical with Acute Health Hazard and Chronic Health Hazard.

2. International regulations

CANADA

Not applicable.

EU-Regulations

Not applicable

3. National regulations

No additional information available

4. US State regulations

California Prop 65 Warning: This product does not contain any chemicals known to State of California to cause cancer, birth, or any other reproductive defects.

CAS# 1308-38-9 can also be found on the following state right to know lists: New Jersey, Pennsylvania.

Section 16 - Additional Information

References: Not available.

Other Special Considerations: Not available.

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall Tradeasia International Pte. Ltd. Be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Tradeasia International Pte. Ltd. has been advised of the possibility of such damages