COPPER(II) SULFATE PENTAHYDRATE

SECTION 1: CHEMICAL PRODUCT IDENTIFICATION

Product Name: Copper(II) sulfate pentahydrate
Product Code: CM 23116
CAS#: 7758-99-8
Synonym: Cobaltous sulfate
Chemical Name: Not available
Chemical Formula: $CuSO_4 \cdot 5H_2O$
Formula weight : 249.68

SECTION 2: COMPOSITION ANDINFORMATION ON INGREDIENTS

Composition:
Name: Copper(II) sulfate pentahydrate
Toxicological Data on Ingredients: Acute Tox. 4; Eye Dam. 1;
Aquatic Acute 1; AquaticChronic 1; H302, H318, H400, H410

SECTION 3: HAZARDS IDENTIFICATION

Classification of the substance or mixture
Serious eye damage (Category 1), H318
Potential Acute Health Effects: Short-term (acute) aquatic hazard (Category 1), H400
Acute toxicity, Oral (Category 4), H302
Potential Chronic Health Effects: Long-term (chronic) aquatic hazard (Category 1), H410
Carcinogenic Effects: Not available.
Mutagenic Effects: Not available.
Teratogenic Effects: Not available.
Developmental Toxicity: Not Available

SECTION 4: FIRSTAID MEASURES

Description of first aid measures
General advice Consult a physician. Show this safety data sheet to the doctor in attendance.
If inhaled If breathed in: 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: Flush eyes with water as a precaution.
If swallowed: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
Most important symptoms and effects, both acute and delay: No data available
Indication of any immediate medical attention and special treatment needed: No data available

SECTION 5: FIRE AND EXPLOSION DATA

Extinguishing media
Suitable extinguishing media :
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Special hazards arising from the substance or mixture
Nature of decomposition products not known.
Not combustible.

Ambient fire may liberate hazardous vapours.
Advice for firefighters Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. 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.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling
Work under hood. Do not inhale substance/mixture.
Conditions for safe storage, including any incompatibilities
Tightly closed. Dry.
Storage Class: Air sensitive. hygroscopic Handle and store under inert gas.
Not available.
Specific end use(s) A part from the uses:
No other specific uses are stipulated

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure controls
Appropriate engineering controls Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
Personal protective equipment
Eye/face protection Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Skin 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.
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.
Respiratory protection For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator.For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Control of environmental exposure Do not let product enter drains.

SECTION 9: PHYSICAL ANDCHEMICAL PROPERTIES

Appearance Form	:Crystalline
Colour	:Blue
Odour	:Not available
Odour Threshold	:Not available
pH	:Not available
Melting point/freezingpoint	:110°C
Initial boiling pointandboilingrange	:Not available
Flash point	:Not available
Evapouration rate	:Not available
Flammability (solid,gas)	:Not available

Upper/lower flammabilityorexplosivelimits	:Not available
Vapour pressure	:Not available
Vapour density	:Not available
Relative density	:2,284 g/cm3
Water solubility	:Not available
Partition coefficient	:Not available
Auto-ignition temperature	:Not available

SECTION 10: STABILITY AND REACTIVITY DATA

Reactivity no data available
Chemical stability
The product is chemically stable under standard ambient conditions (room temperature).
Possibility of hazardous reactions
no data available
Conditions to avoid :
no data available
Incompatible materials
no data available
Hazardous decomposition products Other decomposition products - In the event of fire

SECTION 11: TOXICOLOGICAL INFORMATION

Information on toxicological effects
Acute Toxicity:
L LD50 Oral - Rat - 300 mg/kg
LD50 Dermal - Rat - > 2.000 mg/kg
Skin corrosion/irritation no data available
Serious eye damage/eye irritation no data available
Respiratory or skin sensitization no data available
Carcinogenicity
May cause cancer by inhalation.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity:
Toxicity to fish static test LC50 - Oncorhynchus mykiss (rainbow trout) - 0,032 mg/l- 96 h
Persistence and degradability:
Not available.
Bioaccumulative potential no data available
Mobility in soil no data available
Results of PBT and vPvB assessment PBT/vPvB assessment not available
Other adverse affects no data available

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods Product Offer surplus and non-recyclable solutions to a licensed disposal company. 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

UN number:
ADR/RID: 3077 IMDG: 3077 IATA: 3077
UN proper shipping name
ADR/RID: Environmentally Hazardous Substance, Solid, N.O.S. (Copper (II) sulfate pentahydrate)
IMDG: Environmentally Hazardous Substance, Solid, N.O.S. (Copper (II) sulfate pentahydrate)
IATA Environmentally Hazardous Substance, Solid, N.O.S. (Copper (II) sulfate pentahydrate)
Transport hazard class(es):
ADR/RID: 9 IMDG: 9 IATA: 9
Packaging group:
ADR/RID: III IMDG: III IATA: III
Environmental hazards:
ADR/RID: Yes IMDG Marinepollutant: Yes IATA: Yes

SECTION 15: OTHER REGULATORY INFORMATION

Regulatory information This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

SECTION 16: OTHER INFORMATION

References: Full text of H AND R-Statements.
H302 Harmful if swallowed.
H318 Causes serious eye damage.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
Other Special Considerations: Not available

The information contained in this data sheet represents the best information currently available to us. However, no warranty is made with respect to its completeness and we assume no liability resulting from its use. The information is offered solely for user‘s obligation to investigate and determine the suitability of the information for their particular purpose.