

信意企業股份有限公司
BUILDMORE ENTERPRISE CO., LTD.

7F-2, NO.57, FU HSING N. ROAD
 TAIPEI, TAIWAN, REP. OF CHINA

P.O. BOX 34-10 TAIPEI
 TAIWAN, REP. OF CHINA

TEL: 886-2-27523137 (6 LINES) FAX: 886-2-27515019

E-mail : export@bm-group.com.tw

Safety Data Sheet

Copper Sulphate Pentahydrate

Section 1 Chemical Product and Company Identification

Manufacturer/Supplier	Buildmore Enterprise Co., LTD. 7F-2, No. 57, Fu Hsing N. Road, Taipei, Taiwan, Rep. Of China
Telephone Number	886-2-27523137 (6Lines)
Fax Number	886-2-27515019
Emergency Contact Phone	886-2-27523139
Chemical Name	Copper Sulphate Pentahydrate

Section 2 Hazard Identification

Classification of the substance or mixture:	acute toxicity substance 4th degree (if swallowed), skin corrosion/irritation material 2nd level, serious eye damage/irritation material 2nd grade, Skin allergens 1th, 2nd level for germ cell mutagenic substances, toxic to reproduction substances 2nd-level, a specific organ systems System toxic substances ~ 1th grade repeat exposure, hazardous substances in the water environment (chronic) level 1th
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Mark:



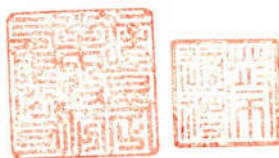
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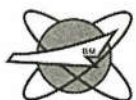
SIGNAL WORD:

dangerous

Hazard warning signal:

Harmful if swallowed Cause skin irritation Causes severe eye irritation May cause skin irritation Suspected of causing genetic defects Doubt on fertility or fetal harm Damage to organs through prolonged or repeated exposure Very toxic to aquatic life with long lasting effects





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Hazard precautions:

In case of accident or feel discomfort immediately contact
medical Obtained before the use of explain Placed in a locked
place Before you understand all of the safety precautions do
not dispose Avoid release to the environment

Section 3 Composition / Information on Ingredients

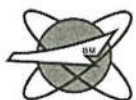
Ingredient	CAS No	Proportion	Hazardous
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Copper Sulphate Pentahydrate	7758-99-8	100%	Yes

Section 4 First Aid Measures

Ingestion:	Give large amounts of milk, egg white, gelatin solution, or if they are not available, large quantities of water. Do not induce vomiting or give anything to an unconscious person. Avoid alcohol. Call Poison Control Center or a physician.
Skin:	Wash skin thoroughly with soap and water. Remove and wash contaminated clothing before reuse.
Eyes:	Immediately flush eyes with plenty of water for 15-20 minutes. Hold eyelids apart during irrigation. Call a physician for treatment advice.
Inhalation:	Remove person to fresh air. If not breathing, give artificial respiration. Get medical attention immediately.

Section 5 Fire Fighting Measures

Flash Point:	Not applicable.
Flammable Limits:	Not flammable. If heated above 400°C it can decompose to emit toxic fumes of oxide and sulfur.
Auto Ignition Temperature:	Not applicable.
Extinguishing Media:	Copper Sulfate does not burn nor support combustion. If stored with other combustible products use water, CO ₂ or dry chemical.
Special Fire Fighting Instructions:	If dry heated above 600°C, SO ₂ is evolved. If water is used it will solubalize the Copper Sulfate and care should be taken to



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keep such water out of streams or other water bodies.
Fire Fighting Equipment: Wear self-contained breathing apparatus.
Fire and Explosion Hazards: Sealed containers may rupture when heated due to release of water from crystals.

Section 6 Accidental Release Measures

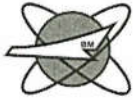
Use clean-up methods that avoid dust generation. Wear NIOSH or MSHA approved respirator if dust will be generated. Cover spill with absorbent material such as seeping compound or lime. Sweep up and put into an appropriate container for proper disposal in an approved method. Prevent accidental entry of solution into streams or other bodies of water. Shovel spills into plastic bags and seal with tape.

Section 7 Handling and Storage

Signal Word: DANGER
Handling Information: Avoid breathing dust or mist. Sweep up crystals or powder, Eye wash stations should be available in work areas. Users should wash hands before eating, drinking, chewing gun, smoking or using the toilet. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. Wash and change into clean clothing as soon as possible.
Storage Information: Store in closed containers in a cool, dry, well-ventilated area away from heat sources and reducing agents. Store in original containers. Keep away from galvanized pipe, aluminum and nylon. Place damaged containers in plastic bags.

Section 8 Exposure Controls / Personal Protection

Engineering Controls: Use adequate general or local ventilation to keep airborne concentrations below the exposure limits.
Eye Protection: Use safety glasses with side shields or goggles.
Skin Protection: Applicators and other handlers should wear long-sleeved shirts and long pants, waterproof gloves, shoes plus socks and protective eyewear. Discard clothing and other absorbent materials that have been drenched or heavily contaminated



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with product concentrate. Do not reuse them. Keep and wash
PPE separately from other laundry.

Section 9 Physical and Chemical Properties

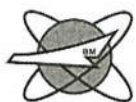
Appearance:	Blue crystals or powder
Molecular formula:	$\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$
Boiling Point:	150°C
Melting Point:	Not available
Vapor Density:	not applicable
Specific Gravity:	2.284 @ at 15.6°C
Solubility in Water:	22.37% @ 0°C 117.95% @100°C
Solubility in Other Solvents:	Soluble in methanol, glycerol and slightly soluble in ethanol.
Molecular Weight:	249.68
Odor:	Odorless

Section 10 Stability and Reactivity

Stability:	Stable
Conditions to Avoid:	Product is highly soluble, but does not react with water.
Incompatibility:	Solutions are mildly corrosive to steel. Store solutions in plastic or rubber or 304, 347 or 316 stainless steel. Iron and moisture should be avoided. Store in a dry area. Incompatible with aluminum powder, acetylene gas, hydroxylamine, magnesium and moisture. Contact with magnesium can generate dangerous levels of hydrogen gas. With exposure to air it will oxidize and turn whitish.
Hazardous Decomposition Products:	Not at normal production temperatures and pressures. If dry heated above 600°C material decomposes to cupric oxides and sulfur dioxide.
Polymerization:	Will not occur.

Section 11 Toxicological Information

Inhalation:	$\text{LC}_{50} > 2.95 \text{ mg/L}$ (rat) Inhalation of dust can result in irritation
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	of nasal mucous membranes and sometimes of the pharynx, on occasion ulceration with perforation of the nasal septum.
Skin:	LD ₅₀ > 8.0 g/kg (rabbit)
Ingestion:	LD ₅₀ > 472.5 mg/kg (rat)
Primary Eye Irritation:	Corrosive, irreversible eye damage.
Primary Skin Irritation:	Slightly irritating
Respiratory Tract Sensitization:	Not available.
Note to Physician:	Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression and convulsions may be needed. Wilson's disease can be aggravated by excessive exposure. Symptoms include nausea, vomiting, epigastria pain, diarrhea, dizziness, jaundice, and general debility.
Additional Information:	Inhalation of dust and mists of Copper Salts can result in irritation of nasal mucous membranes, sometimes of the pharynx and on occasion ulceration with perforation of the nasal septum. Exposure to Copper dust causes discoloration of the skin.

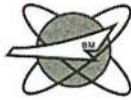
Section 12 Environmental and Disposal Information

Spills and Leaks:	Comply with local regulations on reporting spills. Do not wash away crystals or powder. Recover dry if possible. If product is in a confined solution, react with soda ash to form an insoluble Copper Carbonate solid that can be scooped up.
Waste Disposal:	Do not reuse container. Comply with local environmental control regulations. Sweep up crystals, powder or insoluble Copper Carbonate and dispose of in an approved landfill.
Environmental Effects:	May be dangerous if it enters the public water systems. Follow local regulation. Toxic to fish and plants. Fish toxicity critical concentration is 235mg/l. and plant toxicity is 25 mg/l.

Section 13 Regulatory Information

ACUTE HEALTH HAZARD

OSHA: This product is considered hazardous under the OSHA



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Hazardous Communication Standard (29 CFR 1910.1200).

TSCA: Listed on the Chemical Inventory

CERCLA Hazardous Substances: RQ is not assigned to the broad class of copper compounds.

RCRA: When discarding this material as supplied, it does not meet RCRA characteristic definition if ignitability, corrosiveness, reactivity, and is not listed in 40CFR 261.33.

Section 14 Shipping Information

Hazard: 9
ID: UN 3077
DG: 111

Section: 15 Other Information

Federal and State Regulations: TSCA 8(b) inventory: Water SARA 313 toxic chemical notification and release reporting: Copper compounds
CERCLA:
Hazardous substances.: Copper sulfate pentahydrate: 10 lbs. (4.536 kg);
Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Section 16 SDS Preparation Information

SDS Revisd Date: 18/Jan/2016

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.

Prepared By: Dennis Pai, Quality Controller of
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