

M A T E R I A L S A F E T Y D A T A S H E E T

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1.Trade Name	Chiba-M		
2.Manufacture' s Information	公 司 名:千葉工場 地 址:東莞市沙田鎮楊公洲工業區 電話號碼: 0769-88869316~7 傳真: 0769-88869308 Prepare: Technical development dept.		
3.Product Identification	· General use : Brightener for sulfuric acid copper plating. · Division: ☐ Chemical, ☒ Mixture · Hazardous Ingredients		
	Chemical name	Contents(%)	CAS No.
	Sulfuric acid	2.7	7664-93-9
	· Others material: Copper sulfate, Organic sulfure compound, etc.		
4. Hazards Identification	· Classification: Acute toxicity substance by Japan Chemical Industry Association. · Most important hazards:When swallow,danger will increase by vomit and have stomachache. If eye will contact with this material,firstly corrosive and will blind person. · Environmental effects:This material will be strong acid and not drain against environmental place.		
5.First Aid Measures	In the case of · Eye contact: Immediately flush eyes thoroughly with running water for more than 15 minutes and seek medical attention. If cleaning time is delay and not complete,harm will happen again and therefore,contact medical attention certainly. · Skin contact:Immediately flush exposed skin with lots of running water. By the condition of a patient,seek medical attention. · Inhalation:In generally,inhalation will be not arise by regular handling condition.If the case of halation,remove the victim to fresh air place and will gargle.If any adverse effects are noted,seek medical attention. · Ingestion:When swallow,danger will increase by vomit due to corrosive and therefore,large milk or water will be add in stomach and will dilute and clean for stomach ,However,never give anything by month to an unconscious victim. Immediate medical attention is necessary.		
6.Fire Fighting Measures	· Extinguishment:This material will nonflammable and therefore,move Safety place.Direct water spraying will not use due to the strong acid liquid will scatter and fire fighting draining water will be treating by regulation.Fire fighting operation will use protective safety wear, etc · Extinguishing media:Dry chemical,water,alcohol resistant form,carbon dioxide.		
7.Accidental Release Measures	· Personal precautions:Stretch a rope around spilled area and keep people will away.Recovery will use for protective spectacles,gloves,etc.and will work from windward.		

8. Accidental Release Measures	Environmental precautions: Stop the flow with sand and transfer the liquid into the plastic container and seal tightly. Small case of recovery at the material will absorb by earth and sand. Neutralize the remainder with soda ash or 10% solution of lime and flush with water. High concentration material will not draining for environmental place.
9. Handling & Storage	- Prevention of user exposure: Workman will attend for wear protection and avoid contact. - Storage conditions: Keep continuous tightly closed and stored at room temperature (10~25°C) and omit of high temperature, direct sunshine. - Incompatibility: Strong alkaline, cyanogens, metal. - Packaging materials: Plastics, plastic film.
10. Exposure Controls / Personal Protection	- Concentration control: No regulation. - Concentration acceptable: TLV-TWA 2ppm (as H₂SO₄, ACGIH 1999). - Equipment: Tap water, eye wash stations, and safety shower should be immediately accessible. The location of these should be shown in a noticeable place. - Protective materials: Glasses (goggles), rubber gloves, rubber boots, rubber or vinyl cloth.
11. Physical & Chemical Properties	- Appearance: Violet liquid. - pH: Strong acid (less than 1) - Specific gravity: 1.02~1.03 (25°C) - Odor: Weakly special odor. - Solubility in solvent: Soluble in water. - Volatility: None. - Flash point: None. - Inflammability: None.
12. Stability & Reactivity	- Stability: Stable at regular handling condition. - Reactivity: Product will corrosive and dissolves almost kinds of metal and will happen to hydrogen gas of catch fire and explosion. - Hazardous decomposition products: Sulfur oxide (but after evaporation, strong heating will decompose.)
13. Toxicological Information	- Acute toxicity of main components. LD₅₀ (as Sulfuric acid): 2140 mg/kg (Oral rat) - Human effects Local effects: Contact part of material will become inflamed (corrosive). Sensitization: Not available. Chronic toxicity: Not available.
14. Ecological Information	- Nitrogen content: Less than 0.1% - Phosphorus contents: Not include. - COD_{mn}: Not determined. - BOD content: Not determined. - Biodegradability are no good for basic dyes.
15. Disposal Consideration	- Waste from residues: Waste should be taken by a licensed professional waste company, or waste will burn by most proper equipment. On the other hand, dispose after the following treatment. ① Dilute the waste with water several times. ② Neutralize with solution of slaked lime and will be remove as precipitate. ③ Using by activated carbon treatment and COD are confirmed for quantity in standard limits and draining. - Contaminated packaging: The disposal containers should be thoroughly washed and burned or disposed in accordance with local environmental control regulations. The effluent generated in the above mentioned treatment should flushed into an effluent treatment plant.

16. Transporration Information	· Transport measure and conditions: Container is tightly closed and be careful for damage and leakage of product. Apply the related transportation laws and regulations in your country. · U.N.Classification: Class8(Corrosive substance). · U.N.Number: 1760
17. Regulatory Information	· The product should be treated in accordance with all applicable laws and regulations in your country.
18. Other Information	This product is produced by special use and therefore, please consider not use expect our company' s catalogs. This Material Safety Data is based on information which is, to the best of our knowledge and belief, accurate. Since the hazards information given here is hmitted and the conditions of use and handling are beyond our control, no warranty is given. Careful handling is always required.