



North Metal and Chemical Company

1. Company Identification and Product Hazard Overview:

Product Name: NorthChem 2916, Copper Sulfate Pentahydrate
Synonyms: Blue Vitrol, Bluestone, Cupric Sulfate
Recommended Use: For industrial or agricultural use.
Manufactured by: **NORTH Metal and Chemical Company**
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York, PA USA 17403
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In Case of Emergency Call CHEMTREC (24 Hours): 1-800-424-9300

2. Hazard Identification:

GHS Classification: Acute Toxicity—Oral Category 4
Skin Corrosion/Irritation - Category 2
Serious Eye Damage/Irritation - Category 2
Signal Word: WARNING
Pictogram:



Hazard Statements:

H302 : Harmful if swallowed
H312 : Harmful in contact with skin
H319 : Causes serious eye irritation
H401 : Toxic to aquatic life

Precautionary Statements:

P264 : Wash face, hands, and any exposed skin thoroughly after handling
P270 : Do not eat, drink, or smoke when using this product
P280 : Wear protective gloves/protective clothing/eye protection/face protection

Response Statements:

P305+P351+P338: IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P337+P313 : If eye irritation persists: Get medical advice/attention
P301+P310 : IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
P302+P352 : IF ON SKIN: Wash with plenty of soap and water.
P362+P364 : Take off contaminated clothing and wash it before reuse
P330 : Rinse mouth

3. Composition/Information on Ingredient:

Common Name: Copper Sulfate Pentahydrate
CAS Number: 7758-99-8
Weight %: 100%

4. First Aid Measures:

- Eyes** : Flush eyes with running water for at least fifteen minutes. Remove any contact lenses. If irritation persists, get medical aid.
- Skin** : Flush skin with running water for fifteen minutes. Call a physician. Wash contaminated clothing before reuse.
- Ingestion** : Rinse mouth out and promptly drink large quantities of milk, egg white, gelatin solution, or if these are not available, drink large quantities of water. If the product is swallowed, DO NOT induce vomiting. Never give anything by mouth to an unconscious person. Avoid alcohol.
- Inhalation** : If safe to do so, remove individual from further exposure. Supply fresh air. If cough or other symptoms develop, call doctor/poison center immediately.
- Note to Physicians** : Treat symptomatically. Material may be corrosive. Possible mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression and convulsions may be necessary. Wilson's disease can be aggravated by excessive exposure. Symptoms include nausea, vomiting, epigastric pain, diarrhea, jaundice, and general debility.

5. Fire Fighting Measures:

- Fire/Explosion Hazard** : Copper Sulfate does not burn nor will it support combustion
- Extinguishing Media** : Use CO₂, dry chemical, or water spray.
- General Hazard** : Evacuate personnel downwind in-order to avoid inhalation of irritating and/or harmful fumes and smoke.
- Fire Fighting Procedures**: This product is a non-flammable substance. No acute hazard.
- Special hazards arising from the substance or mixture: Oxides and Sulphur oxides
- Fire Fighting Equipment**: Full protective equipment and self-contained breathing apparatus (SCBA) should be used for all indoor fires and any significant outdoor fires. If possible, firefighters should control run-off water to prevent environmental contamination.

6. Accidental Release Measures:

- Protective Gear for Personnel** : Gloves and eye goggles.
- Spill Clean-up Procedures** : Avoid the generation of dusts during clean-up. Wear NIOSH or MSHA approved respirator if dust will be generated. Dry sweep up, using a sweeping compound. Shovel spill material into plastic bags and seal with tape. Place in appropriate containers for disposal. Dispose of contents/container to an approved waste disposal plant. Prevent run off to storm sewers and ditches leading to natural waterways.
- Environmental Precaution** : Do not allow to enter sewers or ground water, or penetrate the soil.

7. Handling and Storage:

- Handling** : Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Handle in accordance with good industrial hygiene and safety practice. Use personal protection recommended in Section 8 .
- Storage** : Store in a cool, dry well-ventilated area. Keep containers closed when not in use. Observe all federal, state and local regulations when storing or disposing of this substance. Store away from reducing agents
- Incompatible Materials** : Aluminum powders, acetylene, hydroxylamine, magnesium, moisture. Contact with magnesium can generate dangerous levels of hydrogen gas.

8. Exposure Controls and Personal Protection:

Exposure Control :

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Copper sulfate pentahydrate 7758-99-8	TWA: 1 mg/m ³ Cu dust and mist	TWA: 1 mg/m ³ Cu dust and mist	IDLH: 100 mg/m ³ Cu dust and mist TWA: 1 mg/m ³ Cu dust and mist

- Engineering Controls** : Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Maintain eyewash / safety shower stations

8. Exposure Controls and Personal Protection Continued:

Personal Protective Equipment:

Eyes and face: Wear safety glasses with side shields or goggles when handling this material.

Skin: Wear protective clothing and gloves when handling this product to prevent prolonged skin contact. Wear waterproof gloves. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with product's concentrate. Do not reuse them. Keep and wash PPE separately from other laundry.

Respiratory: If necessary, wear an approved respirator for dusts or mists: MSHA/NIOSH approved number prefix TC-21C, or a NIOSH approved respirator with any R, P or HE filter. Alternatively, provide respiratory protection in accordance with Paragraph 1910.134 of Title 29 of the Code of Federal Regulations

Work Hygienic Practices: Facilities storing or using this material should be equipped with emergency eyewash, and a safety shower. Good personal hygiene practices should always be followed. Do not eat, drink, or smoke when using this product.

9. Chemical and Physical Properties:

Appearance/Color	: Transparent blue crystals or blue powder	Partition Coefficient	: Not available
Odor	: Odorless	Solubility	: 22.37% @ 0° C, 32° F Soluble in methanol, glycerol, and slightly soluble in ethanol
Odor threshold	: N/A	Melting/Freezing Point	: 110° C / 230° F
Flash Point	: Not determined	Boiling Range	: 150° C / 302° F
Evaporation Rate	: Not applicable	Flammability	: Not determined
Auto-ignition Temp	: Not determined	Specific Gravity	: 2.284
Decomposition Temp	: Not determined		
Vapor Density	: Not applicable		

10. Stability and Reactivity:

Stability : The product is stable under normal ambient conditions of temperature and pressure.

Hazardous

Decomposition Products : Toxic gases may be formed by fire

Hazardous

Polymerization : Will not occur

Incompatible Materials : Aluminum powders, acetylene, hydroxylamine, magnesium, moisture. Contact with magnesium can generate dangerous levels of hydrogen gas

Conditions to Avoid : Solutions are mildly corrosive to steel. Store in plastic or rubber or 304,347, or 316 stainless steel

11. Toxicological Information:

Toxicity Data

LD50 oral : 472 mg/kg, rat

LD50 dermal : >2g/kg, rat

Skin Contact : Harmful in contact with skin

Eye Contact : Avoid contact with eyes

Inhalation : Avoid inhalation of dust

Ingestion : Harmful if swallowed

Sensitization : None Known

Chronic Toxicity

Carcinogenic Listings : Not a carcinogen

Mutagenicity : None known

12. Ecological Information:

Ecotoxicity:

Very toxic to aquatic life with long lasting effects

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Copper sulfate pentahydrate 7758-99-8		0.66 - 1.15: 96 h Lepomis macrochirus mg/L LC50 semi-static 0.96 - 1.8: 96 h Lepomis macrochirus mg/L LC50 static 0.1478 - 0.165: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 0.09 - 0.19: 96 h Oncorhynchus mykiss mg/L LC50 static 0.6752: 96 h Pimephales promelas mg/L LC50 static		0.147 - 0.227: 48 h Daphnia magna mg/L EC50 Static

Biological oxygen demand (BOD) : Not determined

Chemical oxygen demand (COD) : Not determined

13. Disposal Considerations:

Disposal Method : Dispose of waste at an appropriate waste disposal facility according to current applicable laws and regulations.

Product Disposal : Recycle or reuse whenever possible. Uncontaminated waste may be returned to the manufacturer. Disposal should be in accordance with applicable regional, national, and local laws and regulations

14. Transport Information:

Regulatory Information	UN No.	Proper Shipping Name	Hazard Class	Packing Group
US DOT	3077	Environmentally Hazardous Substance, Solid, NOS (Cupric Sulfate)	9	III
IMDG	3077	Environmentally Hazardous Substance, Solid, NOS (Cupric Sulfate)	9	III
IATA	3077	Environmentally Hazardous Substance, Solid, NOS (Cupric Sulfate)	9	III

15. Regulatory Information:

U.S. Federal Regulations:

TSCA Inventory Status : This product is listed as active on the TSCA inventory

CERCLA Section 103: regulates as a hazardous substance. RQ 10 lbs

SARA TITLE III (EPCRA) Section 311/312: This product was found to be on the acute hazard list.

SARA 313: This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372 SARA 313 - Threshold Values 1.0%

California Proposition 65: This product contains chemicals known to the state of California to cause cancer and birth defects.

Pennsylvania and New Jersey Right to Know Components: Copper Sulfate, CAS# 7758-99-8

16. Other Information:

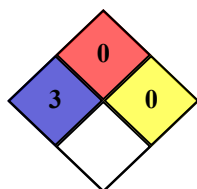
HMIS Rating:*

HEALTH	3
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	D

RATING	HEALTH	FIRE HAZARD	PHYSICAL HAZARD
0	No significant risk to health	Will not burn	Product stable under ambient temperature
1	Can cause irritation or minor reversible injury.	Must be preheated to burn	Product can become unstable at high temperatures and pressures.
2	Can cause temporary or residual injury	Ignites when moderately heated	Product can become unstable and cause violent chemical reaction at normal pressures and temperatures
3	Can cause serious injury	Ignition occurs at normal temperature	Product capable of forming explosive mixtures and is capable of detonation in presence
4	Can be lethal from single or repeated exposure.	Extremely flammable	Product is highly explosive and unstable. Exothermic reactions possible with decomposition, polymerization, reaction with water or self reaction

Personal Protection D - Face Shield, gloves, and apron

NFPA Rating:*



RATING	HEALTH	FIRE HAZARD	REACTIVITY
0	Minimal Hazard	Will not burn	Normally Stable
1	Can cause significant irritation	Must be preheated to burn	Unstable at high temperatures
2	Can cause temporary incapacitation or residual injury	Ignites when moderately heated	Normally unstable. Can readily go under violent chemical reaction but do not detonate.
3	Can cause permanent injury.	Ignition occurs at normal temperature	Capable of detonation, or of explosive reaction, but requires a strong ignition source.
4	Can be lethal.	Extremely flammable	May explode at normal temperatures and pressures

Revision Date: April 23, 2025

Reasons for Revision : Initial Document Creation.

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