



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Produced for: Gowan Company
P.O. Box 5569
Yuma, Arizona 85366-5569
(928) 783-8844

For 24-Hour Emergency Assistance (Spill, Leak, Fire, or Exposure), Call CHEMTREC[®]:

For MEDICAL Emergency:

Inside the U.S.: (800) 424-9300
Outside the U.S.: (703) 527-3887
(888) 478-0798

Product: Badge[®] X₂

EPA Signal Word: Warning

EPA Registration No.: 80289-12

Active Ingredient: Copper Oxychloride (23.82%)
Chemical Name: Copper Oxychloride

CAS No.: 1332-40-7

Active Ingredient: Copper hydroxide (21.49%)
Chemical Name: Cupric hydroxide

CAS No.: 20427-59-2

2. Hazards Identification

Physical Properties

Appearance: Microgranules of light blue-greenish color

Odor: Faint aromatic odor

Medical Conditions Likely to be Aggravated by Exposure

May be fatal if swallowed. Causes substantial but temporary eye injury. Harmful if absorbed through skin. Harmful if inhaled. Avoid contact with skin, eyes or clothing.

Primary Routes of Exposure

Skin contact, eye contact, inhalation.

Hazardous Decomposition Products

None known

Unusual Fire, Explosion, and Reactivity Hazards

None

3. Composition/Information On Ingredients

INGREDIENT NAME	CAS No.	OSHA – PEL	ACGIH – TLV	NTP/IARC/OSHA CARCINOGEN
Copper Oxychloride (23.82%)	1332-40-7	None	None	No
Copper Hydroxide (21.49%)	20427-59-2	None	None	No

Only the identities of the active ingredient(s) and any *hazardous* inert ingredients are listed. Specific information on all of this product's ingredients can be obtained by the treating medical professional or spill emergency responder for the management of exposures, spills, or safety assessments.

4. First Aid Measures

IF SWALLOWED:	<ul style="list-style-type: none">• Call poison control center or doctor immediately for treatment advice.• Have person sip a glass of water if able to swallow.• Do not induce vomiting unless told to do so by the poison control center or doctor.• Do not give anything by mouth to an unconscious person.
IF IN EYES:	<ul style="list-style-type: none">• Hold eye open and rinse slowly and gently with water for 15-20 minutes.• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing.• Call a poison control center or doctor for treatment advice.
IF ON SKIN OR CLOTHING:	<ul style="list-style-type: none">• Take off contaminated clothing.• Rinse skin immediately with plenty of water for 15-20 minutes.• Call a poison control center or doctor for treatment advice.
IF INHALED	<ul style="list-style-type: none">• Move person to fresh air.• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth to mouth if possible.• Call a poison control center or doctor for further treatment advice.
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. FOR MEDICAL EMERGENCIES INVOLVING THIS PRODUCT, CALL TOLL FREE: 1-888-478-0798.	

5. Fire Fighting Measures

Flash Point

Badge X2 is not flammable or explosive.

Appropriate Extinguishing Media

In case of fire, use water, dry chemical, carbon dioxide (CO₂), or foam.

Risk arising from combustion

Avoid inhaling the fumes which at high temperatures may contain toxic substances such as HCl.

Special Fire Fighting Procedures

Firefighters and others that may be exposed to vapors, mists, dusts, or products of combustion should wear full protective clothing and self-contained breathing apparatus. Equipment should be thoroughly cleaned after use.

Unusual Fire or Explosion Hazards

None

6. Accidental Release Measures

In Case of Spills or Leaks

Measures for personal safety:

Use gloves and protective eyewear and clothing (see Section 8).

Environmental measures:

Control spills with soil or sand. If the product has entered a waterway and/or drainage system, or has contaminated the ground and/or vegetation, notify the competent authorities.

Cleaning methods:

Rapidly recover the product and prevent it from entering into drainage systems, if possible. In so doing wear protective clothing (see Section 8). The product might, where appropriate, be absorbed by inert material. After the product has been recovered, rinse the area and contaminated materials involved with water. Dispose unrecoverable product, absorbant material and/or rinsate solids as hazardous substance (see Section 13).

7. Handling and Storage

Handling

Avoid contact with eyes, skin, or clothing. Wash hands thoroughly after handling or contact. Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Wash contaminated clothing before re-use. Thoroughly clean equipment after use. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

Storage

Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Store in original container in a cool, dry, place. Adequately ventilated premises.

8. Exposure Controls/Personal Protection

Precautionary measures:

Give adequate ventilation to the premises where the product is stored and/or handled.

Personal Protective Equipment:

Eye Protection:

Protective eyewear (goggles, safety glasses, or face shield).

Skin Protection:

Long-sleeved shirt and long pants. Chemical-resistant gloves, such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber. Shoes plus socks.

Respiratory Protection:

No special requirement when used as recommended. If airborne exposure is excessive, wear respirator. Respiratory protection programs must comply with all local, regional, and national regulations.

9. Physical and Chemical Properties

Appearance: Microgranules of light blue-greenish color

Odor: Faint aromatic odor

pH: 7.67 @ 25°C 10 g/l

Density: 1.11 g/cm³; (tap density)

Solubility in water: Dispersable

Note: These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specification items.

10. Stability and Reactivity

Stability: Stable under normal conditions of handling and storage.

Hazardous decomposition products: None

Conditions to avoid: None in particular. Store in original container in a cool, dry place.

11. Toxicological Information

Acute Toxicity/Irritation Studies: (Based on the mixture)

Acute toxicity:

LD50 (oral): >300 mg/kg b.w. (rat, female)
LD50 (dermal): > 2000 mg/kg b.w. (rat)
LC50 (4h) (inhalation): not required

Irritation:

Skin: not irritant (rabbit).
Eyes: mild irritant (rabbit).

Sensitization:

Not sensitizing agent.

Data referred to technical Copper Oxychloride and Copper Hydroxide:

Carcinogenic effects:

No carcinogenic effects.

Mutagenic effects:

No mutagenic effects.

Teratogenic effects:

No teratogenic effects.

12. Ecological Information

Environmental Hazards: This product is toxic to fish and aquatic invertebrates and may contaminate water through runoff. This product has a potential for runoff for several months or more after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters or rinsate

List of substances dangerous for the environment and corresponding classification:

Data referred to technical Copper Oxychloride CAS: 1332-40-7

Fish (*Onchorhynchus mykiss*): LC50 (96h): 0.217 mg Cu/L
Freshwater invertebrate (*Daphnia magna*): LC50 (48h): 0.29 mg Cu/L
Algae (*Scenedesmus Subspicatus*): EC50 (72h): 56.3 mg Cu/L

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Data referred to technical Copper Hydroxide CAS: 20427-59-2

Fish (*Onchorhynchus mykiss*): LC50 (96h): 0.0165 mg Cu/L
Freshwater invertebrate (*Daphnia magna*): LC50 (48h): 0.0422 mg Cu/L
Algae (*Scenedesmus Subspicatus*): EC50 (72h): 22.5 mg Cu/L

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

13. Disposal Considerations

Product disposal:

Wastes resulting from the use of this product that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticide disposal or in accordance with applicable Federal, state, or local procedures.

Container disposal:

This is a nonrefillable, non-rigid container (bag). Do not reuse or refill this container.

Empty the package completely. Then dispose of the empty container according to state and local regulations.

Place in trash or offer for recycling if available or return it to the seller, or, if allowed by state and local authorities, by burning. If burned stay out of smoke.

14. Transport Information

DOT Classification

Not Regulated

International Maritime Organization

UN 3077, Environmentally Hazardous Substance, Solid, N.O.S., (Copper Oxychloride, Copper Hydroxide), 9, PG III, Marine Pollutant

International Civil Aviation Organization

UN 3077, Environmentally Hazardous Substance, Solid, N.O.S., (Copper Oxychloride, Copper Hydroxide), 9, PG III

15. Regulatory Information

SARA Title III Classification

Section 302/304:

Not applicable

Section 311/312:

Acute health hazard (immediate)

Section 313 chemical(s):

Not applicable

Proposition 65

Not Applicable

CERCLA Reportable Quantity (RQ)

None

RCRA Classification

Under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

TSCA Status

Exempt from TSCA

16. Other Information

NFPA Hazard Ratings

Health: 1

Flammability: 0

Reactivity: 0

0	Least
1	Slight
2	Moderate
3	High
4	Severe

Notice: The information and recommendations contained herein are provided in good faith and are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information herein.

Prepared By:

Gowan Company
(928) 783-8844

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