



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Formulator: Gowan Company
P.O. Box 5569
Yuma, Arizona 85366-5569
(800) 883-1844

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: Kentan[®] DF

EPA Signal Word: Danger

Active Ingredient: Copper hydroxide (61.3%)
Equivalent to 40.0% by weight

Chemical Name: Cupric hydroxide

Chemical Class: Weak base of transition metal

EPA Registration No.: 80289-2

CAS No.: 20427-59-2

2. Hazards Identification

Physical Properties

Appearance: Light blue-green granules

Odor: Odourless

Symptoms of Acute Exposure

Not available

Medical Conditions Likely to be Aggravated by Exposure

Causes irreversible eye damage. Harmful if swallowed. Harmful if absorbed through skin. Harmful if inhaled.

Primary Routes of Exposure

Inhalation and skin contact. Do not get in eyes or on clothing.

Hazardous Decomposition Products

None known

Unusual Fire, Explosion, and Reactivity Hazards

None known

3. Composition/Information On Ingredients

INGREDIENT NAME	CAS No.	OSHA – PEL	ACGIH – TLV	NTP/IARC/OSHA CARCINOGEN
Copper Hydroxide (61.3%) Equivalent to 40% by weight.	20427-59-2	Not listed	Not listed	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 IN EYES:	• 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 SWALLOWED:	• 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 INHALED	• 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.
IF ON SKIN OR CLOTHING:	• 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.
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

This material is not combustible as tested by the Tag Closed Cup Test.

Auto Ignition Temperature

Not determined.

Appropriate Extinguishing Media

In case of fire, use water (flood with water), dry chemical, CO₂, or alcohol foam.

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 known

6. Accidental Release Measures

In Case of Spills or Leaks

Keep unnecessary people away and isolate hazard area. Wear appropriate personal protective equipment described in Section 8. Sweep up spill, scoop or vacuum and remove. Flush residual spill area with water. Contain large spills with dikes and transfer the material to appropriate containers for reclamation or disposal. Absorb remaining material or small spills with an inert material and then place in a chemical waste container. Flush residual spill area with water. Refer to Section 13 for disposal information and Section 15 for reportable quantity information.

7. Handling and Storage

Handling

Avoid contact with eyes or clothing. Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. 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 under cool, dry conditions.

8. Exposure Controls/Personal Protection

Personal Protective Equipment:

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Goggles or faceshield
- Chemical-resistant gloves such as Natural Rubber.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent material that have been drenched or heavily contaminated with the product's concentrate. Do not reuse them.

ENGINEERING CONTROLS STATEMENTS:

When handlers use closed systems or enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

9. Physical and Chemical Properties

Appearance: Light blue-green granules

Odor: Odourless

pH: 8.8 – 9.0 (1% solution)

Density: 63.67 lbs/cu ft (1.02 g/cc)

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:

This product should be stable for at least two years under normal conditions of warehouse storage. Store under well-ventilated, cool and dry storage conditions away from foodstuffs, reducing agents and acids.. Do not store under moist conditions.

Hazardous decomposition products: None known.

Hazardous polymerization: Will not occur.

Incompatibility with other materials: None.

Conditions to avoid: Store under well-ventilated, cool and dry storage conditions, Avoid moisture conditions.

11. Toxicological Information

Oral LD₅₀ (Rat): 944.6 mg/kg

Dermal LD₅₀ (Rat): >2,000 mg/kg

Acute Inhalation (Rat, 4-hr): >1.28 mg/l

Eye Irritation (Rabbit): Moderately irritating

Skin Irritation (Rabbit): Not irritating

Dermal Sensitization: Is not considered a dermal sensitizer.

12. Ecological Information

List of substances dangerous for the environment and corresponding classification:

Copper Hydroxide technical

CAS: 20427-59-2

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

13. Disposal Considerations

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.

Dispose of empty container in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke. This product should not be dumped, spilled, rinsed or washed into sewers or public waterways.

14. Transport Information

DOT Classification

Not regulated

International Maritime Organization

UN3077 Environmentally Hazardous Substance, Solid, N.O.S.,(Copper Hydroxide),9,PG III, Marine Pollutant

International Civil Aviation Organization

UN3077 Environmentally Hazardous Substance, Solid, N.O.S.,(Copper Hydroxide),9,PG III

15. Regulatory Information

SARA Title III Classification

Section 302/304:	Not applicable
Section 311/312:	Immediate (acute) health hazard Delayed (chronic) health hazard
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:	2
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:

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(800) 883-1844

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