



MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

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

Emergency Phone: (928) 783-3803
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: **BOTRAN® 5F Fungicide**

EPA Signal Word: Caution
Active Ingredient: Dicloran (46.7%)
Chemical Name: 2,6-dichloro-4-nitroaniline
Chemical Class: Chloronitrobenzene

EPA Registration No.: 10163-226
CAS No.: 99-30-9

2. HAZARDS IDENTIFICATION

Physical Properties

Appearance: Yellow liquid
Odor: Slight aniline smell

Symptoms of Acute Exposure

No systemic reaction has been noted in humans.

Medical Conditions Likely to be Aggravated by Exposure

None known

Primary Routes of Exposure

Harmful if it comes in contact with skin or if it's swallowed and inhaled.

Hazardous Decomposition Products

None known up to 100°C

Unusual Fire, Explosion, and Reactivity Hazards

Toxic fumes such as hydrogen chloride (HCl) and oxides of nitrogen (NO_x) may develop if product is burned.

3. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT NAME	OSHA – PEL	ACGIH – TLV	OTHER	NTP/IARC/OSHA CARCINOGEN
Dicloran (46.7%)	None	None	Not established	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 poisoning is suspected, immediately contact a physician, the nearest hospital, or the nearest Poison Control Center. Tell the person contacted the complete product name, and the type and amount of exposure. Describe any symptoms and follow the advice given.

IF ON SKIN: Wash with soap and water. Get medical attention.

IF IN EYES: Flush with water. If eye irritation persists, call a physician.

4. FIRST AID MEASURES (continued)

IF SWALLOWED: Drink warm water and induce vomiting by touching back of the throat with finger and/or by administering syrup of ipecac. Follow with milk and a mild cathartic (Milk of Magnesia). Call a physician or Poison Control Center immediately. Never give fluids or induce vomiting if patient is unconscious or having convulsions.

FOR MEDICAL EMERGENCIES INVOLVING THIS PRODUCT, CALL TOLL FREE: (888) 478-0798

5. FIRE FIGHTING MEASURES

Flashpoint (test method): > 200°F

Flammable Limits (% in air): Not applicable

Autoignition Temperature: Not available

Appropriate Extinguishing Media

Use water spray, Class A, B or C extinguisher.

Fire Fighting Guidance

Wear self-contained breathing apparatus (SCBA).

Unusual Fire, Explosion, and Reactivity Hazards

Toxic fumes such as hydrogen chloride (HCl) and oxides of nitrogen (NO_x) may develop if product is burned. Dispersion of fine dust in air may form explosive mixture.

6. ACCIDENTAL RELEASE MEASURES

In Case of Spills or Leaks

Keep unnecessary people away and isolate hazard area. Spread absorbent material over spill and sweep up. SWEEP UP SPILL CAREFULLY. Place material into a clean, dry container and cover for disposal. Wash contaminated areas with water and detergent. Inform authorities if material enters sewer or watercourse. Do not contaminate water, food or animal feed through inappropriate disposal.

7. HANDLING AND STORAGE

CAUTION: May be harmful if swallowed, inhaled or absorbed through the skin. Avoid breathing spray mist. Avoid contact with skin, eyes, or clothing. Do not contaminate water, food or feed by storage or disposal.

Precautions in Storing

Store in original container in a cool dry place and keep container closed. Do not reuse container. DO NOT contaminate water, food or animal feed through inappropriate storage.

Storing

Store in the original container and keep closed. Store containers in a cool, dry place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

Use in well-ventilated areas.

Personal Protection

Eye/Face

Not required; use normal safety precautions.

Skin Protection

Wear a long sleeved shirt and long pants, shoes plus socks, and waterproof gloves.

Respiratory Protection

Not required; use normal safety precautions.

Additional Protection

Information

Harmful if swallowed. Avoid contact with eyes and skin. Avoid inhalation of dust or spray mist.

User Safety

Recommendations

Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing if pesticide gets inside. Then wash thoroughly and put on clean clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Yellowish liquid
Odor:	Slight aniline smell
Melting Point:	192-194°C
Boiling Point:	Not available
Specific Gravity/ Density:	1.286 @ 20°C
Solubility in H₂O Dicloran	Miscible
Vapor Pressure Dicloran	2 x 10 ⁻⁶ at 25°C (technical)

10. STABILITY AND REACTIVITY

Stability:	Stable under normal storage conditions for at least 36 months.
Hazardous Polymerization:	Will not occur
Decomposition Products:	None known for up to 100° C

11. TOXICOLOGICAL INFORMATION

Acute Toxicity/Irritation Studies

Laboratory testing has shown Dicloran to have no chronic effects.

Ingestion:	Acute Oral LD ₅₀ (rat):	>5,000 mg/kg body weight
Dermal:	Acute Dermal LD ₅₀ (rabbit):	>2,000 mg/kg body weight
Inhalation:	Acute Inhalation LC ₅₀ (rat-male):	>2.13 mg/L air – 4 hour
	Acute Inhalation LC ₅₀ (rat-female):	>3.24 mg/L air – 4 hour
Eye Contact:	Slightly irritating	
Skin Contact:	Slightly irritating	
Skin Sensitizer:	Mild sensitizer (Guinea pig)	

Carcinogenic Potential

None

12. ECOLOGICAL INFORMATION

Summary of Effects

Dicloran

Toxic to fish. For terrestrial uses, do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not apply where runoff is likely to occur. Do not apply when weather conditions favor drift from areas treated. Do not contaminate water when disposing of equipment wash waters.

13. DISPOSAL CONSIDERATION

Pesticide Disposal

Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Disposal

Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, 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

Not regulated

International Civil Aviation Organization

Not regulated

15. REGULATORY INFORMATION

SARA Title III Classification

Section 302/304: Not applicable
Section 311/312: Immediate (acute) health hazard
Section 313 chemical(s): Dicloran

Proposition 65

Not applicable

CERCLA Reportable Quantity (RQ)

None

RCRA Classification

If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, 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	0	Least
Flammability:	0	1	Slight
Reactivity:	0	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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(928) 783-8844

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