



MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

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

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: Avadex® MicroActiv Herbicide

EPA Signal Word: CAUTION **EPA Registration No.:** 10163-287

Active Ingredient: Triallate, S-(2,3,3-trichloroallyl)-diisopropylthiocarbamate (10%) **CAS No.:** 2303-17-5

Chemical Class: Thiocarbamate

2. HAZARDS IDENTIFICATION

Physical Properties

Appearance: Granular, free-flowing solid

Primary Routes of Exposure

Causes Moderate Eye Irritation. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

Hazardous Products of Combustion

None known

Unusual Fire, Explosion, and Reactivity Hazards

None known

3. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT NAME	OSHA – PEL	ACGIH – TLV	OTHER	NTP/IARC/OSHA CARCINOGEN
Triallate, S-(2,3,3-trichloroallyl)-diisopropylthiocarbamate *** (10%)	N/A	N/A	N/A	N/A
Montmorillonite (CAS#1318-93-0) /Attapulgite (CAS# 8031-18-3) Mixture*(<90%)	15 mg/m ³ TWA (total)* 5 mg/m ³ TWA (respirable)*	10 mg/m ³ TWA (total)* 3 mg/m ³ TWA (respirable)*	N/A	N/A
Crystalline Quartz (<3%) CAS# 14808-60-7	0.1 mg/m ³ TWA**	0.1 mg/m ³ TWA**	N/A	IARC: Group 1****

* OSHA and ACGIH have not established specific exposure limits for this material. However, OSHA and ACGIH have established limits for nuisance dusts which are the least stringent exposure limits applicable to dusts.

** Respirable dust

*** Gowan Company has adopted an airborne exposure guideline of 56 ppb 8-hour TWA for this component.

**** Group 1: The agent (mixture) is carcinogenic to humans. The exposure circumstance entails exposures that are carcinogenic to humans. This category is used when there is sufficient evidence of carcinogenicity in humans.

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**
- Call a 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 a poison control center or doctor. Do not give anything by mouth to an unconscious person.
- 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.
- 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.

HOT LINE NUMBER

When seeking medical attention, take the container label if at all possible. If not, take information which identifies the product, that is, the product names and registration numbers.. You may also contact 1-888-478-0798 for emergency medical treatment information.

5. FIRE FIGHTING MEASURES

Flashpoint (test method): Non Applicable

Appropriate Extinguishing Media

In case of fire use water spray (fog), foam, dry chemical, or CO₂.

Fire Fighting Guidance

Firefighters and others that may be exposed to products of combustion should wear self-contained breathing apparatus. Equipment should be thoroughly decontaminated after use.

Unusual Fire, Explosion, and Reactivity Hazards

None known

Hazardous Products of Combustion

None known

6. ACCIDENTAL RELEASE MEASURES

In Case of Spills or Leaks

Observe all protection and safety precautions when cleaning up spills – See Exposure Controls/Personal Protection, Section 8.

Collect solid material and place in metal drum and dispose of in accordance with instructions provided under DISPOSAL CONSIDERATIONS. After all solid material is removed, floors or other impervious surfaces should be washed with an industrial detergent solution and rinsed with water.

Refer to Section 13 for disposal information and Section 15 for reportable quantity information.

7. HANDLING AND STORAGE

Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

Handling

Avoid contact with eyes, skin or clothing. Wash thoroughly with soap and water after handling. User should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.

Storage

Keep bag closed to prevent spills and contamination. Do not contaminate water, foodstuffs, feed or seed by storage or disposal.

Emptied container retains vapor and product residue. Observe all labeled safeguards until container is cleaned, reconditioned, or destroyed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Loaders, applicators and other handlers must wear: Long-sleeved shirt and long pants, shoes plus socks.

In addition, loaders must wear: A NIOSH-approved dust mist filtering respirator with MSHA/NIOSH approval number prefix TC-21C or a NIOSH-approved respirator with any N, R, P, or HE filter.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Granular, free-flowing solid
Bulk Density:	33.5 to 39.0 lbs/ft ³
Boiling Point:	298°F @ 2 mmHg (active ingredient)
Decomposition Temperature:	>300°F
Vapor Pressure:	Nonvolatile solid
Solubility:	Insoluble in water

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 specifications for the product.

10. STABILITY AND REACTIVITY

Stability:	Stable under normal conditions of warehouse storage. Thermally stable up to 300°F.
Hazardous Polymerization:	Will not occur
Decomposition Products:	None known
Incompatibility:	None known

11. TOXICOLOGICAL INFORMATION

Acute Toxicity/Irritation Studies (Similar Formulation)

Acute Oral:	Rat, LD₅₀:	12,000 mg/kg body weight
Acute Dermal:	Rabbit LD₅₀:	>20,000 mg/kg body weight
Eye Irritation:	Rabbit, 24 hr:	3.2 on a scale of 110.0, slightly irritating
Skin Irritation:	Rabbit, 24 hr:	1.4 on a scale of 8.0, slightly irritating

Carcinogenic Potential
None

12. ECOLOGICAL INFORMATION

Do not apply directly to water, or to areas where water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash waters.

Ecotoxicity data shown below is for similar formulation.

96-hr LC₅₀ Bluegill sunfish: 13 mg/L, slightly toxic

96-hr LC₅₀ Rainbow trout: 19 mg/L, slightly toxic

Ground Water Advisory

Triallate has a degradation product TCPSA (trichloropropene sulfonic acid) with properties and characteristics associated with chemicals detected in ground water. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination.

12. ECOLOGICAL INFORMATION - continued

Surface Water Advisory

Under some conditions, the triallate degradate TCPSA may have a high potential for runoff into surface water (primarily via dissolution in runoff water). These include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas over-laying extremely shallow ground water, areas with in-field canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and areas over-laying tile drainage systems that drain surface water.

13. DISPOSAL CONSIDERATION

PESTICIDE 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: Emptied container retains vapor and product residue. Observe all labeled safeguards until container is cleaned, reconditioned or destroyed. Completely empty container into transfer or application equipment. Do not reuse container. Dispose of empty sack 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

Bulk packages: UN3077, RQ, Environmentally hazardous substance, N.O.S. (Triallate), 9, PG III

International Maritime Organization

UN3077, Environmentally hazardous substance, N.O.S. (Triallate), 9, PG III, Marine Pollutant

International Civil Aviation Organization

UN3077, Environmentally hazardous substance, N.O.S. (Triallate), 9, PG III

15. REGULATORY INFORMATION

SARA Title III Classification

Section 302/304: Not applicable

Section 311/312: Delayed (chronic) health hazard

Section 313 chemical(s): Triallate (10%) CAS # 2303-17-5

Proposition 65: Not applicable

CERCLA Reportable Quantity (RQ): Triallate RQ=100 lbs (1000 lbs product)

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

16. OTHER INFORMATION

NFPA Hazard Ratings

Health: 1
Flammability: 1
Reactivity: 1

0	Least
1	Slight
2	Moderate
3	High
4	Severe

Prepared By:

Gowan Company
(800) 883-1844

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.