



## 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:** Buckle® Granular Herbicide

**EPA Signal Word:** CAUTION      **EPA Registration No.:** 10163-289

**Active Ingredient:** Triallate (10%)      **CAS No.:** 2303-17-5

**Active Ingredient:** Trifluralin (3%)      **CAS No.:** 1582-09-8

**Chemical Class:** Thiocarbamate

### 2. HAZARDS IDENTIFICATION

#### Physical Properties

**Appearance:** Yellow to orange colored granules

**Odor:** Slight

#### Primary Routes of Exposure

Skin contact, eye contact, and inhalation

#### Hazardous Products of Combustion

Carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>), hydrogen fluoride (HF), sulphur oxides (SO<sub>x</sub>)

#### Unusual Fire, Explosion, and Reactivity Hazards

This material as normally packaged and handled can contain sufficient fines to form an explosive mixture if dispersed in a sufficient quantity of air.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT NAME	OSHA – PEL	ACGIH – TLV	OTHER	NTP/IARC/OSHA CARCINOGEN
Triallate (10%)	N/A	N/A	N/A	N/A
Trifluralin (3%)	N/A	N/A	N/A	IARC Group 3*
Clay (85%) CAS# 1302-87-0	15 mg/m <sup>3</sup> (total dust) 5 mg/m <sup>3</sup> (respirable)	10 mg/m <sup>3</sup> (inhalable) 3 mg/m <sup>3</sup> (respirable)	N/A	IARC Group 1**
Quartz (2%) CAS# 14808-60-7	30 mg/m <sup>3</sup> (total dust) 10 mg/m <sup>3</sup> (respirable)	0.05 mg/m <sup>3</sup> (respirable)	N/A	N/A

\* The agent (mixture, or exposure circumstance) is unclassifiable as to carcinogenicity to humans.

\*\* The agent (mixture) is carcinogenic to humans.

This product is hazardous according to the OSHA Hazard Communication Standard, (29 CFR 1910.1200)

### 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 eye.
  - Call a poison control center or doctor for 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.

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## 4. FIRST AID MEASURES - continued

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### HOT LINE NUMBER

- In case of an emergency involving this product, call toll free 1-888-478-0798.
  - Have the product container or label with you when calling a poison control center or physician, or going for treatment.
  - This product is identified as Buckle Granular Herbicide, EPA Reg. No. 10163-289.
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## 5. FIRE FIGHTING MEASURES

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**Flashpoint (test method):** Non Applicable

**Appropriate Extinguishing Media**

Water, dry chemical, carbon dioxide (CO<sub>2</sub>), foam

**Fire Fighting Guidance**

Firefighters and others that may be exposed to vapors, mists, dusts, or products or combustion should wear full protective clothing and self-contained breathing apparatus. Equipment should be thoroughly cleaned after use. Water runoff can cause environmental damage. If water is used to fight fire, dike and collect runoff.

**Unusual Fire, Explosion, and Reactivity Hazards**

This material as normally packaged and handled can contain sufficient fines to form an explosive mixture if dispersed in a sufficient quantity of air.

**Hazardous Products of Combustion**

Carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>), hydrogen fluoride (HF), sulphur oxides (SO<sub>x</sub>)

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## 6. ACCIDENTAL RELEASE MEASURES

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**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.

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## 7. HANDLING AND STORAGE

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**Handling**

CAUSES MODERATE EYE IRRITATION. Avoid contact with eyes, skin or clothing. Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals. Wash thoroughly with soap and water after handling. When using do not eat, drink or smoke. Thoroughly clean equipment after use.

**Storage**

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

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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**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.
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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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**Appearance:** Yellow to orange-colored granules  
**Odor:** Slight  
**Melting Point:** 26°C (technical Triallate and trifluralin mixture)  
**Specific Gravity:** 1.27 @ 26°C (technical Triallate and trifluralin mixture)  
**Bulk Density:** 39-40.5 lbs/ft<sup>3</sup> (typically 39.75) for the granular

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## 10. STABILITY AND REACTIVITY

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**Stability:** Stable under normal conditions of handling and storage.  
**Hazardous Polymerization:** Will not occur  
**Decomposition Products:** Thermal decomposition.  
**Hazardous Mixtures:** None known  
**Conditions To Avoid:** None known  
**Hazardous Products of Combustion:** Carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>), hydrogen fluoride (HF), sulphur oxides (SO<sub>x</sub>)

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## 11. TOXICOLOGICAL INFORMATION

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### Acute Toxicity/Irritation Studies (Similar Formulation)

<b>Acute Oral:</b>	<b>Rat, LD<sub>50</sub>:</b>	>5,000 mg/kg body weight
<b>Acute Dermal:</b>	<b>Rabbit LD<sub>50</sub>:</b>	>5,000 mg/kg body weight
<b>Eye Contact:</b>	<b>Rabbit:</b>	Slight irritant
<b>Skin Contact:</b>	<b>Rabbit:</b>	No skin irritation
<b>Skin Sensitization:</b>	<b>Guinea Pig:</b>	Not a sensitizer

**Carcinogenic Potential**  
None

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## 12. ECOLOGICAL INFORMATION

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This chemical is extremely toxic to freshwater marine, and estuarine fish and aquatic invertebrates including shrimp and oyster. Do not apply in a manner which will directly expose canals, lakes, streams, ponds, marshes or estuaries to aerial drift. 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: 0.68 mg/L; 96-hr LC50 Rainbow trout: 0.32 mg/L; 48-hr EC50 Water flea: 0.42 mg/L.

### 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.

### 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 not separated from adjacent surface waters with vegetated filter strips, and areas over-laying tile drainage systems that drain surface water.

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## 13. DISPOSAL CONSIDERATION

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**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. Keep out of drains, sewers, ditches and waterways.

**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 container in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

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## 14. TRANSPORT INFORMATION

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### DOT Classification

Non-bulk packages: Not regulated

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

### International Maritime Organization

UN3077, RQ, Environmentally hazardous substances, N.O.S. (Trifluralin), 9, PG III, Marine pollutant

### International Civil Aviation Organization

None

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## 15. REGULATORY INFORMATION

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### SARA Title III Classification

Section 302/304: Not applicable

Section 311/312: Immediate (acute) health hazard

Delayed (chronic) health hazard

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

Trifluralin (3%) CAS #1582-09-8

**Proposition 65:** Not applicable

**CERCLA Reportable Quantity (RQ):** Trifluralin RQ=10 lbs (333 lbs product)

Triallate RQ=1 lbs (10 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

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## 16. OTHER INFORMATION

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### NFPA Hazard Ratings

**Health:** 1

**Flammability:** 1

**Reactivity:** 1

0	Least
1	Slight
2	Moderate
3	High
4	Severe

### Prepared By:

Gowan Company  
(928) 783-8844

**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.

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