



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: Permit[®] Herbicide

EPA Signal Word: Caution

Active Ingredient: Halosulfuron methyl (75.0%)

Chemical Name: Methyl 3-chloro-5-(4,6-dimethoxypyrimidin-2-ylcarbamoylsulfamoyl)-1-methylpyrazole-4-carboxylate (IUPAC)

Chemical Class: Sulfonylurea

EPA Registration No.: 81880-2-10163

CAS No.: 100784-20-1

2. Hazards Identification

Physical Properties

Appearance: Beige granules

Odor: Scorched vanilla odor

Medical Conditions Likely to be Aggravated by Exposure

A very small percentage of particularly sensitive people may suffer skin or respiratory reactions.

Primary Routes of Exposure

Skin contact, eye contact and inhalation

3. Composition/Information On Ingredients

INGREDIENT NAME	CAS No.	OSHA – PEL	ACGIH – TLV	NTP/IARC/OSHA CARCINOGEN
Halosulfuron methyl (75.0%)	100784-20-1	None	None	No
Silica, Amorphous Precipitated (<3.0%)	112926-00-8	6 mg/m ³ 8-hr TWA	10 mg/m ³	No
Kaolin Clay (8-13%)	1332-58-7	15 mg/m ³ 8-hr TWA	10 mg/m ³ total dust 8-hr TWA	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 5 minutes, then continue rinsing eye.
 - Call poison control center or physician for treatment advice.
- IF SWALLOWED**
- Call poison control center or physician immediately for treatment advice.
 - Remove visible particles from mouth.
 - Have person rinse mouth thoroughly with water, spit out rinse water.
 - 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.

Have the product container or label with you when calling a poison control center or physician, or going for treatment.

FOR MEDICAL EMERGENCIES INVOLVING THIS PRODUCT, CALL TOLL FREE 1-888-478-0798

This product is identified as Permit Herbicide, EPA Reg. No. 81880-2-10163.

5. Fire Fighting Measures

Flash Point

Not applicable

Appropriate Extinguishing Media

In case of fire, use water, dry chemical, CO₂, or 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 (below 120°F). Do not store under moist conditions.

8. Exposure Controls/Personal Protection

Personal Protective Equipment:

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks

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.

8. Exposure Controls/Personal Protection - continued

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: Beige granules

Odor: Scorched vanilla

pH: 6.6 (1% solution)

Density: 41 lbs/cu ft

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 in a cool, well-ventilated place away from foodstuffs, reducing agents and acids.

Hazardous polymerization: Will not occur.

Incompatibility with other materials: None.

Conditions to avoid: Store under cool, dry conditions (below 120°F). Do not store under moist conditions.

11. Toxicological Information

Oral LD₅₀ (Rat): 1287 mg/kg

Slightly toxic

Dermal LD₅₀ (Rat): >5,000 mg/kg

Practically nontoxic

Eye Irritation (Rabbit):

Moderately irritating

Skin Irritation (Rabbit):

Slightly irritating

Acute Inhalation (Rat, 4-hr): >5.7 mg/l

Practically nontoxic

Dermal Sensitization (Guinea Pig): Permit is not considered a dermal sensitizer in guinea pigs.

Halosulfuron-methyl, the active herbicidal ingredient in Permit herbicide, is considered to be practically nontoxic orally or by inhalation and no more than slightly toxic dermally. It is slightly irritating to eyes and essentially nonirritating to the skin. Halosulfuron-methyl did not produce skin allergy in the guinea pig.

Kaolin Clay (containing <1% crystalline silica)

Permit herbicide contains up to 8-13% kaolin clay. Inhalation of excessive amounts of kaolin dust may produce coughing, sneezing and nasal irritation. Long-term overexposure to kaolin dust may cause respiratory difficulties, such as decreased lung capacity.

Silica, hydrated amorphous

Permit herbicide contains less than 3% silica gel (amorphous silica). Inhalation of silica dust can cause drying of mucous membranes of the eyes, nose and throat (due to absorption of moisture and oils) which may result in irritation and occasional nose bleeds. Repeated exposure to silica gel has not been reported to have significant adverse health effects in workers. However, persons with breathing problems or lung disease may be at an increased risk. Laboratory studies in animals exposed by inhalation to silica gel have shown no adverse effects.

12. Ecological Information

Ecotoxicity data shown is for the active ingredient, halosulfuron-methyl.

48-hr EC₅₀ Daphnia magna: >107 mg/L; practically nontoxic.

96-hr LC₅₀ Bluegill sunfish: >118 mg/L; practically nontoxic.

96-hr LC₅₀ Rainbow trout: >131 mg/L; practically nontoxic.

5-day EC₅₀ Algae (*Selenastrum capricornutum*): 0.0041/L; very highly toxic.

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

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 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:	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:

Gowan Company
(928) 783-8844

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*Halosulfuron-methyl is manufactured by
Nissan Chemical Industries, Ltd.
Product is protected by
U.S. Patent No. 4,668,277