

MATERIAL SAFETY DATA SHEET

Emergency Phone: CHEMTREC 800-424-9300

Effective Date: July 23, 2014

Replaces MSDS of May 15, 2013

1. PRODUCT AND COMPANY IDENTIFICATION:

PRODUCT NAME: Willowood Clomazone 5MEG

CHEMICAL NAME: (2-[2-chlorobenzyl]-4,4-dimethyl-1,2-oxazolidin-3-one)

CHEMICAL FAMILY: Isoxazolidinone Herbicide

EPA REGISTRATION NUMBER: 87290-46

COMPANY IDENTIFICATION:

Willowood, LLC

1600 NW Garden Valley Blvd., Suite 120

Roseburg, Oregon 97471

Tel: 877-679-9963

24/7 Health Emergencies: Call 800-858-7378 (National Pesticide Information Center)

2. HAZARDS IDENTIFICATION SUMMARY:

NOTE: Please refer to Section 11 for detailed toxicological information.

EMERGENCY OVERVIEW: Caution. Clomazone 5MEG can cause eye, lung, and skin irritation. Wear an OSHA approved respirator, and do not breathe Clomazone 5MEG dust. Do not get on clothing or skin. Remove any contaminated clothing and wash the clothing before re-use. Wash hands thoroughly before eating, drinking, chewing gum, or using tobacco. Clomazone 5MEG can have an adverse chronic effect on the liver.

There is no evidence that Clomazone 5MEG is teratogenic, mutagenic, or a human carcinogen at levels below those required for acute toxicity. Clomazone 5MEG is of slight to moderate acute toxicity to fish. It is of low acute toxicity to birds, mammals, and most other wildlife. It is relatively non-toxic to honeybees.

PHYSICAL STATE: Free-flowing, solid granules.

CHEMICAL AND PHYSICAL HAZARD: Clomazone 5MEG is stable and will not undergo hazardous polymerization

APPEARANCE: Light to medium brown/gray free-flowing small granules

ROUTE OF EXPOSURE: Inhalation, Ingestion, Skin Contact, Skin Absorption, or Eye Contact.

IMMEDIATE EFFECTS:

Eye: Can cause slight to moderate eye irritation. Do not get in the eyes.

Skin: Can cause slight to moderate skin irritation. Avoid contact with skin and clothing.

Ingestion: May be harmful if swallowed. Do not ingest Clomazone 5MEG. Acute toxicity is low.

Inhalation: Clomazone 5MEG has a low vapor pressure, so risk of inhalation is normally low. Avoid breathing Clomazone 5MEG dust.

CHRONIC OR DELAYED LONG-TERM: There is no evidence Clomazone 3MEG is a human mutagen, teratogen, or carcinogen at levels below those required for acute toxicity. Some animal studies have shown that Clomazone affects the liver.

Medical Conditions Aggravated by Exposure: May cause irritation of the lungs, upper respiratory tract, and the eyes.

3. COMPOSITION, INFORMATION OF INGREDIENTS:

Components

Name	CAS - No.	EINECS #	Average % by Weight
Clomazone	81777-89-1	not available	5.0%
Prop.			95.0%

4. FIRST AID MEASURES:

GENERAL: Have the product container or label with you when calling a poison control center or doctor or going for treatment.

INHALATION: Move the exposed person to fresh air, free from risk of further exposure. Seek medical attention immediately.

EYE CONTACT: Flush with clean, lukewarm water raising upper and lower eyelids at low pressure for 15 minutes. Remove contact lenses, if present, after the first five minutes and continue to rinse the eyes. Seek medical attention if no relief.

SKIN CONTACT: Remove any contaminated clothing. Rinse area with clean water for 15-20 minutes. Call poison control center or doctor for treatment advice.

INGESTION: Call a poison control center or medical doctor for treatment advice. If the affected person is conscious and able to swallow, have the affected person drink several glasses of water. DO NOT INDUCE VOMITING unless advised to do so by a medical doctor or a poison control center. Lower the head if the exposed person is vomiting to minimize entry into throat and lungs.

NOTE to Physician: There is no specific antidote. Use appropriate supportive and symptomatic treatment as indicated by the patient's condition.

5. FIRE FIGHTING MEASURES:

FLASH POINT: The Flash Point of Clomazone 5MEG is > 212 °F. (100 °C.)

AUTOIGNITION TEMPERATURE: High.

FIRE AND EXPLOSION HAZARDS: During a fire, thermal decomposition of Clomazone 5MEG can produce irritating and toxic gases, including chlorine, hydrogen chloride, nitrogen oxides, and carbon oxides,

SUITABLE EXTINGUISHING MEDIA: Use dry chemicals, carbon dioxide, foam, or water spray.

FIRE FIGHTING INSTRUCTIONS: Wear encapsulated suit and NIOSH-approved self-contained breathing apparatus while fighting a fire involving Clomazone 5MEG. Keep out of the smoke. Fight the fire from an upwind position. Cool closed containers exposed to fire with water spray. Dike the area to

prevent runoff and contamination of water sources. Equipment or materials involved in pesticide fires may become contaminated.

6. ACCIDENTAL RELEASE MEASURES:

PERSONAL PRECAUTIONS: Wear PPE per Section 8. Keep unauthorized people away. Isolate the hazard area. Avoid contact with spilled product or contaminated surfaces.

METHODS FOR CLEANING UP: Avoid creating a dust. Sweep up any spilled material. Collect and keep spilled material in suitable, closed containers for proper disposal. Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations.

HANDLING AND STORAGE PRECAUTIONS: Use normal safety procedures and good personal hygiene. Wash thoroughly after using Clomazone 5MEG, and before eating, drinking, chewing gum, or using tobacco.

ADDITIONAL ADVICE: Avoid allowing Clomazone 5MEG to enter streams, sewers, or other waterways. Clomazone 5MEG can be slightly to moderately toxic to most fish and other aquatic organisms, and slightly to moderately toxic to many birds, mammals, and other wildlife.

7. HANDLING AND STORAGE:

STORAGE TEMPERATURE: Keep in original containers with the containers tightly closed. Keep in sealed containers with barrier to moisture. Avoid temperatures above 100 °F. (38 °C.) or below 32 °F. (0 °C.) Store Clomazone 5MEG in a cool, dry, well-ventilated area. Keep in a secure storage area that is inaccessible to children or animals.

SPECIAL SENSITIVITY: Avoid contact with skin and eyes. Wear PPE per Section 8.

HANDLING AND STORAGE PRECAUTIONS: Avoid breathing Clomazone 5MEG vapors or dust. Remove and wash PPE as soon as possible after handling Clomazone 5MEG. Wash thoroughly after use, and before eating, drinking, chewing gum, or using tobacco.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION:

EYE PROTECTION: Use NIOSH-approved (ANSI Z-87) protective eye wear when there is any possibility of exposing the eyes to Clomazone 5MEG dust.

SKIN PROTECTION: Wear chemically resistant gloves (e.g. nitrile, butyl, or neoprene.) Wear a long-sleeved shirt, long pants, shoes, and socks.

RESPIRATORY PROTECTION: Wear a NIOSH-approved respirator if the airborne conditions result in any dust forming. A respirator is recommended for handling of Clomazone 5MEG.

OCCUPATIONAL EXPOSURE LIMITS: None established.

ENGINEERING CONTROLS: Provide adequate ventilation when product is used. Eyewash and shower should be provided in mixing and loading areas. Refer to product label guidelines.

9. PHYSICAL AND CHEMICAL PROPERTIES:

PHYSICAL FORM: Granular solid.

COLOR: Light to moderate brown/gray.

FLASH POINT: >100 °C.

pH IN WATER: 8.5

SOLUBILITY IN WATER: Dispersible; Clomazone solubility in water at 20 °C is 1100 mg/l

ODOR: Slight

10. STABILITY AND REACTIVITY:

STABILITY: This product is a stable material under normal conditions of storage and handling. Store at temperatures above 32 °F. (0 °C.) and below 100 °F. (38 °C.)

HAZARDOUS POLYMERIZATION: Will not occur.

INCOMPATIBLES: Avoid contact with strong oxidizing agents.

DECOMPOSITION PRODUCTS: Thermal decomposition of Clomazone 5MEG can produce irritating and toxic gases, including chlorine, hydrogen chloride, nitrogen oxides, and carbon oxides.

11. TOXICOLOGICAL INFORMATION:

Acute oral LD₅₀ (rat) >1,300 mg/kg

Dermal LD₅₀ (rabbit) > 2,000 mg/kg

Inhalation LC₅₀ (rat) = 4-6 mg/L/4hour

Clomazone 5MEG is not listed as a human carcinogen by IARC, NTP, OSHA, or AVGIH.

There is no evidence that Clomazone 5MEG is mutagenic or teratogenic.

Clomazone 5MEG is not a dermal sensitizer.

The significant routes of exposure are eyes, ingestion, skin contact, and inhalation.

12. ECOLOGICAL INFORMATION:

Bobwhite quail LD₅₀ ≥ 2000 mg/kg

Mallard duck LD₅₀ ≥ 2000 mg/kg

(This indicates that Clomazone 5MEG is of very low acute toxicity to bird species.)

96-hour LC₅₀ (rainbow trout) = 19 mg/L.

96-hour LC₅₀ (bluegill sunfish) = 34 mg/L.

96-hour LC₅₀ (daphnia magna) = 5.2 mg/L.

(This indicates that Clomazone 5MEG is of low to moderate toxicity to fish)

Clomazone 5MEG is highly toxic to some marine invertebrates, plankton, and algae. Prevent Clomazone 5MEG from getting into any waterways.

Clomazone 5MEG is relatively non-toxic to honeybees.

13. DISPOSAL CONSIDERATIONS:

WASTE DISPOSAL METHOD: Clomazone 5MEG is a gray to brown granular solid. Wear a NIOSH-approved self-contained breathing apparatus and other required PPE while collecting and disposing of

Clomazone 5MEG. Dispose of waste Clomazone 5MEG in accordance with label instructions and in accordance with all local, state, and federal regulations. Follow container label instructions for recycling or disposing of empty Clomazone 5MEG containers.

14. TRANSPORT INFORMATION:

US DOT (ground) SHIPPING NAME: Clomazone 5MEG is not a Hazardous Material nor Dangerous Goods as defined by US DOT under 49 CFR.100-185

IATA (air) SHIPPING NAME: Clomazone 5MEG is not a Hazardous Material nor Dangerous Goods when shipped by air.

IMO (water) SHIPPING NAME: Clomazone 5MEG is not a Hazardous Material nor Dangerous Goods when shipped by ocean

15. REGULATORY INFORMATION:

OSHA STATUS: OSHA does list Clomazone 5MEG as an acute hazardous material.

TSCA STATUS: Clomazone 5MEG is exempt from TSCA, and is subject to FIFRA

CERCLA REPORTABLE QUANTITY: Not Listed

CALIFORNIA PROPOSITION 65: Not Listed

RCRA STATUS: N/A.

SARA 313: Per Section 313 of the Superfund Amendments and Reauthorization Act of 1986, Clomazone 5MEG does not contain any chemicals which are subject to the requirements of this Act.

SARA 311/312: HAZARD NOTIFICATION/REPORTING:

- **SARA Section 302/304:** Not Listed.
- **SARA Section 311:** Hazard categories: Acute, Chronic
- **SARA Section 312:** Threshold Planning Quantity 10,000 lb.
- **SARA Section 313 chemicals:** No ingredients subject to SARA Section 313

IMMEDIATE N **FIRE** N **SUDDEN RELEASE OF PRESSURE** N
DELAYED N **REACTIVE** N

RIGHT TO KNOW: N/A

HAZARDOUS SUBSTANCES LIST: N/A

16. OTHER INFORMATION:

**National Fire Protection Association (NFPA)
Hazardous Materials Identification System (HMIS)**

NFPA		HMIS
	0 Least	
2 Health	1 Slight	2 Health
1 Flammability	2 Moderate	1 Flammability
0 Instability	3 High	0 Reactivity
	4 Severe	

RISK PHRASES: R21, Harmful in contact with skin; R36, Irritating to eyes; and R51, Toxic to aquatic organisms.

SAFETY PHRASES: S2, Keep out of reach of children; S9, Keep container in a well-ventilated place; S25, Avoid contact with eye; S36, Wear suitable protective clothing; S37, Wear suitable gloves; S38, In case of insufficient ventilation, wear suitable respiratory equipment; S39, Wear eye/face protection; S61, Avoid release to the environment; and S62, If swallowed, do not induce vomiting: seek medical advice immediately and show the product container or label.

REASON FOR ISSUE: Minor edits.

APPROVAL DATE: 7/23/2013

PREPARED BY: Jack Firkins

ABBREVIATIONS

ACGIH	American Conference of Governmental Industrial Hygienists
AICS	Australian Inventory of Chemical Substances
CAS#	Chemical Abstract Service Number
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
°C	Celsius temperature scale
CI	China
DSL	Canada Domestic Substances List
ECL	Korean Existing Chemicals List
EEC	European Economic Commission
ENCS	Japanese existing Chemical List
EINECS #	European Inventory of Existing Chemical Substance Number
EU	European Union
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
(Israel)	2001 proposed list of chemical substances to be regulated under Israel Hazardous Substances Law and Regulations List of 1993
IARC	International Agency for Research on Cancer
MAC	Netherlands
MAK	Germany
MITI	Ministry of International Trade and Industry
NA	Not Applicable
ND	Not Determined
NE	Not Established
NIOSH	National Institute of Occupational Safety and Health
NPIC	National Pesticide Information Center
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Act
PICCS	Philippines
PPE	Personal Protective Equipment
Prop	Proprietary
SARA	Superfund Amendments and Reauthorization Act
SWISS	Giftliste 1 and Inventory of Notified New Substances
TSCA	Toxic Substances Control Act
(Taiwan)	List of Toxic Chemical Substances regulated under Taiwan Toxic Chemical Substances Control Act of November 26, 1986
UK	United Kingdom

USA

United States of America

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