

MATERIAL SAFETY DATA SHEET

Emergency Phone: CHEMTREC 800-424-9300

Effective Date: February 21, 2014

New

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Willowood Clomazone 3ME

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

CHEMICAL FAMILY: Isoxazolidinone Herbicide

EPA PRODUCT REGISTRATION NUMBER: 87290-47

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 3ME can cause slight to moderate eye, skin, lung and respiratory tract irritation. Wear an OSHA approved respirator, and do not breathe vapors from Clomazone 3ME. 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 3ME may have an adverse chronic effect on the liver.

There is no evidence that Clomazone 3ME is teratogenic, mutagenic, or a human carcinogen at levels below those required for acute toxicity. Clomazone 3ME 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: Liquid suspension.

CHEMICAL AND PHYSICAL HAZARD: Clomazone 3ME is stable and will not undergo hazardous polymerization

APPEARANCE: Brown liquid suspension.

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 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 3ME. Acute toxicity is low.

Inhalation: Clomazone 3ME has a low vapor pressure, so risk of inhalation is normally low. Avoid breathing vapors from Clomazone 3ME.

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

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

3. COMPOSITION, INFORMATION OF INGREDIENTS:

Components

Name	CAS - No.	EINECS #	Average % by Weight
Clomazone	81777-89-1	not available	31.4%
Prop.			68.6%

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 the exposed 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 3ME is ≥ 100 °C (212 °F)

AUTOIGNITION TEMPERATURE: N/A.

FIRE AND EXPLOSION HAZARDS: During a fire, thermal decomposition of Clomazone 3ME 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 3ME. 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: Use an absorbent such as vermiculite. 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 3ME, and before eating, drinking, chewing gum, or using tobacco.

ADDITIONAL ADVICE: Avoid allowing Clomazone 3ME to enter streams, sewers, or other waterways. Clomazone 3ME can be slightly to moderately toxic to most fish and other aquatic fauna and moderately to highly toxic to aquatic flora. Clomazone 3ME can be slightly to moderately toxic to many birds, mammals, and other wildlife. Clomazone 3ME is of low toxicity to honeybees.

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 3ME 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 vapors from Clomazone 3ME. Remove and wash PPE as soon as possible after handling Clomazone 3ME. 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 eyewear when there is any possibility of exposing the eyes to Clomazone 3ME.

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 vapors. A respirator is recommended for handling of Clomazone 3ME.

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: Liquid suspension.

COLOR: Moderate brown.

FLASH POINT: ≥ 100 °C (212 °F)

pH IN WATER: 6.5

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

ODOR: Slight, aromatic

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 3ME can produce irritating and toxic gases, including chlorine, hydrogen chloride, nitrogen oxides, and carbon oxides.

11. TOXICOLOGICAL INFORMATION:

Acute oral LD_{50} (rat) $> 1,300$ mg/kg

Dermal LD_{50} (rabbit) $> 2,000$ mg/kg

Inhalation LC_{50} (rat) = 4-6 mg/L/4hour

Clomazone 3ME is not listed as a human carcinogen by IARC, NTP, OSHA, or AVGIH.

There is no evidence that Clomazone 3ME is mutagenic or teratogenic.

Clomazone 3ME is not a dermal sensitizer.

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

12. ECOLOGICAL INFORMATION:

Bobwhite quail $LD_{50} \geq 2000$ mg/kg

Mallard duck $LD_{50} \geq 2000$ mg/kg

(This indicates that Clomazone 3ME is of very low acute toxicity to bird species.)

96-hour LC_{50} (rainbow trout) = 19 mg/L.

96-hour LC_{50} (bluegill sunfish) = 34 mg/L.

96-hour LC_{50} (daphnia magna) = 5.2 mg/L.

(This indicates that Clomazone 3ME is of low to moderate toxicity to fish)

Clomazone 3ME is highly toxic to some marine invertebrates, plankton, and algae. Prevent Clomazone 3ME from getting into any waterways.

Clomazone 3ME is relatively non-toxic to honeybees.

13. DISPOSAL CONSIDERATIONS:

WASTE DISPOSAL METHOD: Clomazone 3ME is a brown liquid suspension. Wear a NIOSH-approved self-contained breathing apparatus and other required PPE while collecting and disposing of Clomazone 3ME. Dispose of waste Clomazone 3ME 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 3ME containers.

14. TRANSPORT INFORMATION:

US DOT (ground) SHIPPING NAME: Clomazone 3ME is not a Hazardous Material nor Dangerous Goods as defined by US DOT under 49 CFR.100-185 when shipped by road or rail only.

IATA (air) SHIPPING NAME: Clomazone 3ME is an environmentally hazardous substance, liquid, n.o.s. (Clomazone,) UN3082, DG Class 9, Packing Group III, when shipped by air.

IMO (water) SHIPPING NAME: Clomazone 3ME is an environmentally hazardous substance, liquid, n.o.s. (Clomazone,) UN3082, DG Class 9, Packing Group III, when shipped by ocean

15. REGULATORY INFORMATION:

OSHA STATUS: OSHA does list Clomazone 3ME as an acute hazardous material.

TSCA STATUS: Clomazone 3ME 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 3ME 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: New.

APPROVAL DATE: 2/21/2014

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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