



MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Formulator: Gowan Company
P.O. Box 5569
Yuma, Arizona 85366-5569
(928) 783-8844

For 24-Hour Emergency Assistance (Spill, Leak, Fire, or Exposure), Call CHEMTREC®:

Inside the U.S.: (800) 424-9300
Outside the U.S.: (703) 527-3887
(888) 478-0798

For MEDICAL Emergency:

| | | | |
|---------------------------|---------------------------------------|------------------------------|-----------|
| Product: | MesuroI® 75-W | EPA Registration No.: | 10163-231 |
| EPA Signal Word: | Danger-Poison | CAS No.: | 2032-65-7 |
| Active Ingredient: | Methiocarb (75.0%) | | |
| Chemical Name: | 4-methylthio-3,5-xylylmethylcarbamate | | |
| Chemical Class: | Carbamate | | |

2. HAZARDS IDENTIFICATION

Physical Properties

Appearance: White to off-white
Odor: mild, non-offensive

Symptoms of Acute Exposure

Inhalation, dermal absorption or ingestion of this material may result in systemic intoxication due to inhibition of the enzyme cholinesterase. The sequence of development of systemic effects varies with the route of entry, and the onset of symptoms may be delayed up to one hour or more. Complete symptomatic recovery from sublethal poisoning usually occurs within 24-48 hours once the source of exposure is completely removed. Animal studies have shown that this product is moderately toxic orally and mildly toxic dermally. First symptoms of poisoning may be nausea, increased salivation, lacrimation, blurred vision and constricted pupils. Other symptoms of systemic poisoning include vomiting, diarrhea, abdominal cramping, dizziness and sweating. After inhalation, respiratory symptoms like tightness of chest, wheezing, and laryngeal spasms, may be pronounced at first. If the poisoning is severe, then symptoms of convulsions, low blood pressure, cardiac irregularities, loss of reflexes and coma may occur in extreme cases, death may occur due to a combination of factors such as respiratory arrest, paralysis of respiratory muscles or intense bronchoconstrictions.

Medical Conditions Likely to be Aggravated by Exposure

No specific medical conditions are known which may be aggravated by exposure to the active ingredient in this product; however, any disease, medication or prior exposure which reduces normal cholinesterase activity may increase susceptibility to the toxic effects of the active ingredient. Pulmonary and respiratory diseases may be aggravated by exposure to respirable crystalline silica, which may be contained in this formulation.

Primary Routes of Exposure

May irritate eyes, nose, throat and skin.

Hazardous Decomposition Products

CO, Methyl Amines, CH₃NCO, Methyl mercaptan

Unusual Fire, Explosion, and Reactivity Hazards

During the routine handling of this material, there should be little risk of a dust explosion. However, tests on similar organic materials indicate that an explosive mixture can develop. Therefore, appropriate preventative measures should be taken. If a large dust cloud develops, turn off any devices that may cause a spark and leave the area until the cloud dissipates. Additional information on this subject is available upon request.

3. COMPOSITION/INFORMATION ON INGREDIENTS

| INGREDIENT NAME | OSHA – PEL | ACGIH – TLV | OTHER | NTP/IARC/OSHA CARCINOGEN |
|---|---|---|-----------------|--------------------------|
| Methiocarb (75.0%) | None | None | Not established | No |
| Talc (10-20%) CAS# 14807-96-6 | 2.000 mg/m ³ TWA (respirable) | 2.000 mg/m ³ TWA (respirable) | Not established | No |
| Total crystalline silica (quartz) (<1%) CAS# 14808-60-7 | .100 mg/m ³ TWA (respirable) | .100 mg/m ³ TWA (respirable) | Not established | 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

N-Methyl Carbamate

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 INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further 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 further 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 eye. Call a poison control center or doctor for treatment advice.

NOTE TO PHYSICIAN: ANTIDOTE - Administer atropine sulfate in large therapeutic doses. Repeat as necessary to the point of tolerance. This compound inhibits cholinesterase resulting in stimulation of the central nervous system, the parasympathetic nervous system, and the somatic motor nerves. Do not give morphine. Watch for pulmonary edema, which may develop in serious cases of poisoning even after 12 hours. At first sign of pulmonary edema, the patient should be placed in an oxygen tent and treated symptomatically.

REPEATED OR PROLONGED EXPOSURE TO CHOLINESTERASE INHIBITORS SUCH AS ARE CONTAINED IN THIS PRODUCT MAY CAUSE SUSCEPTIBILITY TO ADVERSE EFFECTS FROM VERY SMALL DOSES OF ANY CHOLINESTERASE INHIBITOR.

FOR MEDICAL EMERGENCIES INVOLVING THIS PRODUCT, CALL TOLL FREE: (888) 478-0798

5. FIRE FIGHTING MEASURES

Flashpoint (test method): Not applicable to solid

Flammable Limits (% in air): Not available

Autoignition Temperature: Not available

Appropriate Extinguishing Media

Use water.

Unusual Fire, Explosion, and Reactivity Hazards

During the routine handling of this material, there should be little risk of a dust explosion. However, tests on similar organic materials indicate that an explosive mixture can develop. Therefore, appropriate preventative measures should be taken. If a large dust cloud develops, turn off any devices that may cause a spark and leave the area until the cloud dissipates. Additional information on this subject is available upon request.

6. ACCIDENTAL RELEASE MEASURES

In Case of Spills or Leaks

Handle and open container in a manner as to prevent spillage. If the container is leaking or material spilled for any reason or cause, carefully sweep material into a pile. Refer to Precautionary Statements on label for hazards associated with the handling of this material. Do not walk through spilled material. Dispose of pesticide as directed above. Isolate area and keep unauthorized people away. Avoid breathing dusts and skin contact. Avoid generating dust (a fine water spray mist, plastic film cover, or floor sweeping compound may be used if necessary). Wear proper protective equipment. Place in covered container for reuse or disposal. Scrub contaminated area with detergent and bleach solution. Repeat. Rinse with water. Use dry absorbent material such as clay granules to absorb and collect the wash solution for proper disposal. Contaminated soil may have to be removed and disposed. Do not allow material to enter streams, sewers, or other waterways or contact vegetation.

7. HANDLING AND STORAGE

May be harmful if swallowed, inhaled or absorbed through the skin. Avoid breathing spray mist. Avoid contact with skin, eyes, or clothing. Store in the original container and keep closed. Store containers in a cool dry place.

Precautions in storing

DO NOT contaminate water, food or feed by storage or disposal. Do not store near any materials intended for use or consumption by humans or animals.

Storing

Store in a cool dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

| | |
|-------------------------------------|--|
| Eye/Face: | Goggles should be used to prevent dust from getting into eyes. |
| Skin Protection: | Applicators and other handlers must wear coveralls over short-sleeved shirt and short pants, waterproof gloves, chemical-resistant footwear plus socks, chemical-resistant headgear for overhead exposure, and a chemical-resistant apron when cleaning equipment, mixing or loading. |
| Respiratory Protection: | For exposures in enclosed areas, a respirator with either an organic vapor-removing cartridge with a prefilter approved for pesticides, or a canister approved for pesticides. For exposure outdoors, a dust/mist filtering respirator. |
| Other/General Protection: | Clean water should be available for washing in case of eye or skin contamination. Educate and train employees in safe use of the product. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. 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. |
| Applicators/Handlers: | Applicators and other handlers must wear coveralls over short-sleeved shirt and short pants, waterproof gloves, chemical-resistant footwear plus socks, chemical-resistant headgear for overhead exposure, and a chemical-resistant apron when cleaning equipment, mixing or loading. |
| User Safety Recommendations: | Users should 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. 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: | White to off-white solid |
| Odor: | Mild, non-offensive |
| Melting Point: | 121°C (MESUROL/methiocarb) |
| Boiling Point: | Not applicable |
| Specific Gravity/ Density: | Not applicable |

9. PHYSICAL AND CHEMICAL PROPERTIES (continued)

Solubility in H₂O

MESUROL/methiocarb 24 ppm at 20° C

Vapor Pressure

MESUROL/methiocarb 2.1 X 10⁻⁰⁷ mm Hg @ 20° C

10. STABILITY AND REACTIVITY

Stability: Stable under normal storage conditions.

Hazardous

Polymerization: Will not occur

Decomposition

Products: CO, Methyl Amines, CH₃NCO, Methyl mercaptan

11. TOXICOLOGICAL INFORMATION

Acute Toxicity/Irritation Studies

| | | |
|----------------------|---|--------------------------|
| Ingestion: | Acute Oral LD ₅₀ (male rat): | 100 mg/kg body weight |
| | Acute Oral LD ₅₀ (female rat): | 60 mg/kg |
| Dermal: | Acute Dermal LD ₅₀ (rat): | >2,000 mg/kg body weight |
| Eye Contact: | Mildly irritating | |
| Skin Contact: | Mildly irritating | |

Carcinogenic Potential

None

12. ECOLOGICAL INFORMATION

Summary of Effects

MESUROL/methiocarb

Do not use on crops used for food or forage. Use only according to label directions. This pesticide is toxic to fish and very highly toxic to birds. For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water by cleaning of equipment or disposal of wastes. This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

13. DISPOSAL CONSIDERATION

Pesticide Disposal

Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. For information concerning the proper disposal of pesticide-related wastes, contact your State Environmental Department, State Department of Agriculture, or the Regional Office of the Environmental Protection Agency for your area.

Container Disposal

Completely empty bag into application equipment. Then dispose of empty bag 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

UN 2757, Carbamate Pesticide, Solid, Toxic, (Mercaptodimethur 75%), 6.1, PG III

International Maritime Organization

UN 2757, Carbamate Pesticide, Solid, Toxic, (Mercaptodimethur 75%), 6.1, PG III, Marine Pollutant

International Civil Aviation Organization

UN 2757, Carbamate Pesticide, Solid, Toxic, (Mercaptodimethur), 6.1, PG III, Marine Pollutant

15. REGULATORY INFORMATION

SARA Title III Classification

| | |
|--------------------------|---------------------------------|
| Section 302/304: | Methiocarb |
| Section 311/312: | Immediate (acute) health hazard |
| Section 313 chemical(s): | Mercaptodimethur |

Threshold Planning Quantity (TPQ): 667 lbs. Mesurol (500 lbs. methiocarb)

Extremely Hazardous Substance (EHS)

Methiocarb

Proposition 65

Not applicable

CERCLA Reportable Quantity (RQ)

13.3 lbs. Mesurol (10 lbs. methiocarb)

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: | 2 |
| Flammability: | 0 |
| Reactivity: | 0 |

| | |
|---|----------|
| 0 | Least |
| 1 | Slight |
| 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

Mesurol® is a registered trademark of Bayer