



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®: **Inside the U.S.:** (800) 424-9300
Outside the U.S.: (703) 527-3887
(888) 478-0798
For Medical Emergency:

Product: EPTAM® 7-E
EPA Signal Word: Warning
Active Ingredient: EPTC (87.8%)
Chemical Name: S-ethyl dipropylthiocarbamate
Chemical Class: Thiocarbamate

EPA Registration No.: 10163-283
CAS No.: 759-94-4

2. HAZARDS IDENTIFICATION

Physical Properties

Appearance: Amber liquid
Odor: Not determined

Symptoms of Acute Exposure

Causes eye, skin and respiratory passage irritation. Exposure to high vapor levels may cause headache, dizziness, numbness, nausea, incoordination, or other central nervous system effects. This product is a cholinesterase inhibitor. Principal routes of exposure are skin contact and inhalation. Symptoms of cholinesterase inhibition may include salivation, sweating, headache, nausea, muscle twitching, tremors, poor coordination, blurred vision, tears, abdominal cramps, diarrhea and chest discomfort.

Medical Conditions Likely to be Aggravated by Exposure

None known

Hazardous Decomposition Products

Can decompose at high temperatures forming toxic gases

Unusual Fire, Explosion, and Reactivity Hazards

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

3. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT NAME	OSHA – PEL	ACGIH – TLV	OTHER	NTP/IARC/OSHA CARCINOGEN
EPTC (87.8%)	Not Listed	Not Listed	0.3 mg/m ³ TWA	No
Kerosene CAS# CAS #8008-20-6			100 mg/m ³ 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:	<ul style="list-style-type: none">· 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.· Call a poison control center or doctor for treatment advice.
If swallowed:	<ul style="list-style-type: none">· 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 by a poison control center or doctor.· Do not give anything by mouth to an unconscious person.
If on skin or clothing:	<ul style="list-style-type: none">· 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.
If inhaled:	<ul style="list-style-type: none">· 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.
NOTE TO PHYSICIAN	
Probable mucosal damage may contraindicate the use of gastric lavage. This product contains EPTC, a thiocarbamate that inhibits cholinesterase. If symptoms of cholinesterase inhibition are present, atropine by injection is antidotal. Pralidoxime chloride (2-PAM) is NOT recommended as an antidote for this compound. Thiocarbamates have been shown in laboratory animals to cause a disulfiram (Antabuse) -type reaction in combination with alcohol.	

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

5. FIRE FIGHTING MEASURES

Flashpoint (test method): 190°F (TCC)
Flammability: Combustible liquid

Fire Fighting Guidance

Use dry chemical, foam or CO₂ extinguishing media. Wear full protective clothing and self-contained breathing apparatus. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion. Prevent use of contaminated buildings, area, and equipment until decontaminated. Water runoff can cause environmental damage. If water is used to fight fire, dike and collect runoff.

Unusual Fire, Explosion, and Reactivity Hazards

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

6. ACCIDENTAL RELEASE MEASURES

In Case of Spills or Leaks

Control the spill at its source. Contain the spill to prevent it from spreading, contaminating soil, or entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions outlined in Section 8. Cover entire spill with absorbing material and place into compatible disposal container. Scrub area with hard water detergent (e.g. commercial products such as Tide, Joy, Spic and Span). Pick up wash liquid with additional absorbent and place into compatible disposal container. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposition.

7. HANDLING AND STORAGE

Precautions in storing

Store the material in a well ventilated, secure area out of reach of children and domestic animals. Do not store food, beverages or tobacco products in the storage area. Prevent eating, drinking, tobacco use, and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

Storage

Keep container tightly closed when not in use. Do not store near seeds, fertilizers or foodstuffs. Can be stored at temperatures as low as minus 50°F.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category E on an EPA chemical resistance category selection chart.

Mixers, Loaders, and Handlers exposed to the concentrate must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves, such as barrier laminate or nitrile rubber or neoprene rubber or viton
- Chemical-resistant apron
- Chemical-resistant footwear and socks
- Protective eyewear

In addition to the above PPE, persons Mixing and Loading into chemigation systems, must wear:

- a NIOSH approved respirator with: an organic-vapor removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C); or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G); or a NIOSH approved respirator with an (OV) cartridge; or a canister with any N, R, P, or HE prefilter.

Applicators and other Handlers exposed to the dilute must wear:

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

In addition to the above PPE, applicators using back-pack or hand-held equipment must wear:

- chemical-resistant gloves such as barrier laminate or nitrile rubber or neoprene rubber or viton

In addition to the above PPE, applicators applying dry bulk fertilizers with a specialized truck designed to treat more than 80 acres, must wear:

- a NIOSH approved respirator with: an organic-vapor removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C); or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G); or a NIOSH approved respirator with an (OV) cartridge; or a canister with any N, R, P, or HE prefilter.

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.

ENGINEERING CONTROLS

Commercial (for-hire) Handlers engaged in impregnating this product onto dry bulk fertilizer must:

- wear the personal protective equipment required for mixers/loaders, except shoes may be substituted for chemical-resistant footwear, and
- have immediately available for use in case of an accident a NIOSH approved respirator with: an organic-vapor removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C); or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G); or a NIOSH approved respirator with an (OV) cartridge; or a canister with any N, R, P, or HE prefilter.
- Use a closed system that meets the requirements listed in the Worker Protection Standard for Agricultural Pesticides.

When other 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)(4-5)], the handler PPE requirements may be reduced or modified as specified in the WPS. IMPORTANT: When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for "applicators and other handlers" and have such PPE immediately available for use in an emergency, such as a spill or equipment breakdown.

USER SAFETY RECOMMENDATIONS

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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Amber liquid

Data indicated below refer to active ingredient: EPTC

Boiling Point: 127°C/20 mmHg

Specific Gravity/

Density: 0.9546 (30°C)

9. PHYSICAL AND CHEMICAL PROPERTIES cont.

Solubility in H₂O

Active Ingredient - 375 mg/l (25 °C). Miscible with common organic solvents, e.g. acetone, ethanol, isopropanol, benzene, xylene, kerosene.

Vapor Pressure

Active Ingredient – 10 × 10³ mPa (25 °C)

10. STABILITY AND REACTIVITY

Stability: Stable under normal use and storage conditions
Hazardous
Polymerization: Will not occur
Decomposition
Products: Can decompose at high temperatures forming toxic gases.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity/Irritation Studies (Finished Product)

Ingestion:	Oral LD ₅₀ (rat)	1,325 mg/kg body weight
Dermal:	Dermal LD ₅₀ (rabbit)	2,750 mg/kg body weight
Inhalation:	Inhalation LC ₅₀ (rat)	10.3 mg/l air – 4 hours
Eye Contact:	Moderately irritating (rabbit)	
Skin Contact:	Mildly irritating (rabbit)	

Carcinogenic Potential

Not carcinogenic in rat or mouse tests

Other Toxicity Information

This product is a cholinesterase inhibitor. Principal routes of exposure are skin absorption and inhalation. Severe cases of cholinesterase inhibition may lead to convulsions, pulmonary edema, respiratory failure and death.

12. ECOLOGICAL INFORMATION

This chemical is toxic to mammals. Do not contaminate water when disposing of equipment washwaters or rinsate. Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark.

Ecotoxicity data shown is for the active ingredient, EPTC.

96-hr LC₅₀ Cutthroat trout: >17 mg/L
96-hr LC₅₀ Bluegill sunfish: >27 mg/L
96-hr LC₅₀ Rainbow trout: >19 mg/L
Slightly toxic to fish.

13. DISPOSAL CONSIDERATION

Do not reuse product containers. Dispose of product containers, waste containers, and residues according to local, state, and federal health and environmental regulations.

Pesticide Disposal

Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Disposal

Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities.

FOR BULK AND MINI-BULK CONTAINERS

Reseal container and offer for reconditioning, or triple rinse (or equivalent) and offer for recycling or reconditioning, or clean in accordance with manufacturer's instructions.

14. TRANSPORT INFORMATION

DOT Classification

Non-Bulk: Not Regulated

Bulk: Combustible Liquid, N.O.S., (contains kerosene), 3, NA1993, PGIII

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

Fire

Section 313 chemical(s):

EPTC

Proposition 65

Not applicable.

CERCLA Reportable Quantity (RQ)

None.

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

16. OTHER INFORMATION

NFPA Hazard Ratings

Health: 2

Flammability: 2

Reactivity: 0

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.

EPTAM® is a trademark of Gowan Company, L.L.C.