



MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name : Ethion 50 % EC

Common Name : Ethion

IUPAC Name : O,O,O',O'-tetraethyl S,S'-methylene bis (phosphorodithioate)

Chemical Abstracts Name : S,S'-methylene bis(O,O-diethyl phosphorodithioate)

CAS No. : [563-12-2]

Chemical formula : $C_9H_{22}O_4P_2S_4$

Molecular weight : 384.48

Chemical Family : Organophosphate

Use : Insecticide

Company Name : HPM Chemicals & Fertilizers Ltd.

Address : 209-210, Anupam Bhawan, Azadpur Commercial Complex, Azadpur, Delhi- 110033

Phone No. : (011)-45071800

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E-mail : info@hpmindia.com

Website : www.hpmindia.com

2. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Content % (w/w)
Ethion	[563-12-2]	50 %
Other	-	50 %

3. HAZARDS IDENTIFICATION



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Classification of the Hazardous Chemical:	: Acute toxicity, Category 2
Signal Word:	: DANGER.
Hazard Statement(s):	: H302 Harmful if swallowed.
Hazards	H360Df May damage the unborn child. Suspected of damaging Fertility.
Precautionary Statement(s):	: P201 Obtain special instructions before use. P280 Wear protective gloves/ protective clothing/ Eye protection/ face protection. P308 + P313 IF exposed or concerned: Get medical Advice/attention.
Skin and Eyes	: Avoid contact with skin and eyes.
Entry route	: Ingestion, Inhalation, Contact with eye or skin.
Symptoms of poisoning	: Headache, giddiness, vertigo, nausea, vomiting, blurred vision, sweating, excessive lacrimation and salivation may occur.

4. FIRST AID MEASURES

Ingestion	: If swallowed, seek medical advice immediately DO NOT induce vomiting.
Eye	: Rinse immediately with plenty of water, also under the Eyelids, for at least 15 minutes. Remove contact lenses. Immediate medical attention is required
Skin	: Take off all contaminated clothing immediately. Wash off immediately with plenty of water. If skin irritation persists, call a doctor. Wash contaminated clothing before reuse
Inhalation	: Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Keep patient warm and at rest. Call a doctor or Poison Information Centre immediately
Advice to Physician	: 1. Atropinize the patient immediately and maintain full atropinization by repeated doses of 2 to 4 mg. at 5 to 10 minutes interval for



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hours together. The need for further atropine administration is indicated by the continuance of symptoms. As much as 25 to 50 mg. may be required in a day. The extent to salivation is a useful criterion to follow in adjusting the dosage of atropine.

2. 1-2 gm 2 PAM dissolved in 10CC distilled water and is injected intravenously very slowly for 10-15 minutes.

5. FIRE FIGHTING MEASURES

Specific Hazard	: There is no risk of an explosion from this product under normal circumstances if involved in a fire.
Extinguishing Media	: Small fires: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. DO NOT use a solid water stream as it may scatter and spread fire. Large fires: Use alcohol-resistant foam or water spray. DO NOT use a solid water stream as it may scatter and spread fire.
Hazard From Combustion products	: As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion . Exposure to decomposition products may be a hazard to health.
Protective equipment	: Wear full protective clothing and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

In Case of Emergency	: In case of spillage it is important to take all steps necessary to <ul style="list-style-type: none">• Avoid eye and skin contact• Avoid contamination of waterways
Clean up Procedures	: Wear full length clothing and PVC gloves, Keep all bystanders away : Procedure for spill <ul style="list-style-type: none">(1) Keep all bystanders away(2) Wear full length clothing and PVC gloves(3) Reposition any leaking containers so as to minimise further leakage(4) Dam and absorb spill with an absorbent material (e.g. sand or soil)



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- (5) Shovel the absorbed spill into drums
(6) Disposal of the absorbed material will depend upon the extent of the spill
- For quantities up to 50 L of product bury in a secure landfill site
 - For quantities greater than 50 L seek advice from the Manufacturer (use emergency contact number below) before attempting disposal. Contain in a secure location until disposal method is established
- (7) Decontaminate spill area with detergent and water and rinse with the smallest volume of water practicable

7. HANDLING AND STORAGE

- Handling** : Avoid contact with eyes and skin. Do not inhale spray mist. Wash hands after use.
- Storage** : Store in tightly sealed original containers in a dry secure place away from fertilisers, seed, feed and food. Store out of direct sunlight. Keep out of reach of children, unauthorised persons and animals.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- Engineering Controls** : In the Workplace: ensure ventilation is adequate and that air concentrations of components are controlled below quote Workplace Exposure Standards. Keep containers closed when not in use. No special requirements. Product is used outdoors.
- Ingestion** : DO NOT eat, drink or apply cosmetics, where there is a potential for exposure to the product.
- Eye Protection** : Safety goggles, chemical splash goggles or face shield for eyes protection should be used. Safety showers and eye wash should be easily available.
- Skin Protection** : Chemical resistant gloves, coveralls socks, apron and chemical resistant foot covering should always be used while handling the product.
- Respiratory protection** : Always use NIOSH/MSHA approved respiratory protection equipment with a universal filter type including particle filter.
- General Protection** : Avoid contact with eyes and skin. While handling the



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product wear cotton overalls buttoned to the neck and wrist. Elbow-length PVC gloves and face shield. After use and before eating, drinking and smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash gloves and contaminated clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Colour	: Light yellow to brown colour liquid
Flash point	: >48°C
Odour	: Pungent
Vapour pressure	: 1×10^{-5} mmHg @ 20°C
	:
Density	: 1.23 to 1.2350 gm/cc at 30°C

10. STABILITY AND REACTIVITY

Chemical Stability	: Stable under standard conditions.
Conditions to Avoid	: Flame, heat, ignition sources and strong oxidizers.
Incompatible Materials	: Incompatible with alkaline preparations and formulating materials.
Hazardous decomposition products	: Not available
Hazardous Reactions	: No polymerization will occur.

11. TOXICOLOGICAL INFORMATION

Acute Oral LD₅₀	: Rat 358 mg/kg
Acute Dermal LD₅₀	: Rat 3300 mg/kg b.w.
Acute Inhalation LC₅₀	: Rat >3.0 mg/lit.
Skin Irritation	: Rabbit: Minimal irritant
Eye Irritation	: Rabbit: Moderate irritant
Skin Sensitization	: Non-sensitizer (guinea pig)

12. ECOLOGICAL INFORMATION



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Birds

Mallard Duck : Mallard ducks: 150 - 612 mg/kg
Bobwhite quail: 70 - 200 mg/kg

Fish

Bluegill Sunfish : LC_{50} (96h) = 0.3 mg/lit
Rainbow trout : LC_{50} (96h) = 0.08 mg/lit
Crucian carp : LC_{50} 0.09 mg/lit

Bees : Highly Toxic to bees

13. DISPOSAL CONSIDERATIONS

Disposal : Dispose of this product only by using according to the label. Do not contaminate drains, streams, rivers or waterways with the chemical or used container. Add rinsing's to spray tank.

Disposal of empty Containers : (1) Rinse containers before disposal. Add rinsing's to the spray tank. DO NOT dispose of undiluted chemicals on site.
(2) Dispose of rinsed, empty containers at a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

14. TRANSPORT INFORMATION

Shipping Name : Organophosphorus pesticide, liquid, toxic
UN No. : 3018
Class : 6.1
Packing group : II
Marine pollutant : YES



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15. REGULATORY INFORMATION

**Hazard
symbol**



**Dangerous for the
environment (N)**

Risk Phrase **R22**, harmful if swallowed.

Safety **S 1/2**: Keep locked up and out of reach of children.

phrase **S 26**: In case of contact with eyes rinse immediately with plenty of
water and seek medical advice.

S 35: The material and its container must be disposed-off in a safe
way.

16. OTHER INFORMATION

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are resented in good faith and believed to be correct. This information applies to the PRODUCT AS SUCH. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear. It is the responsibility of persons on receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produces formulations containing this product, it is the recipient's sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS. Accordingly, no guarantee or warrantee expressed or implied is made by HPM Chemicals & Fertilizers Ltd., as to the results to be obtained based upon the user's use of the information, nor does HPM Chemicals & Fertilizers Ltd., assume any liability arising out of user's use of the information.

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