

MATERIAL SAFETY DATA SHEET

PRODUCT : Ethion 50% EC

PRODUCT DESIGNATION : Insecticide

Section 1. Product & Company Identification

Common Name : Ethion
Grade : Formulation
Active Ingredient : Ethion
Chemical Name of Active : O,O,O',O'-Tetraethyl S,S'-methylene
Ingredient (IUPAC) : bis(phosphorodithioate
Chemical Family of A. I. : organophosphate insecticide
Molecular Formula of A. I. : $C_9H_{22}O_4P_2S_4$
Molecular Mass of A. I. : 384.48 g/mol
Manufacturer & Supplier : **M/s United Chemicals**
Head Office: B-371, 1st Floor, Meera Bagh, New Delhi,
India
Factory: 15/1, 15/2, 15/3, industrial Area, Vidisha, M.P
Telephone Number : +91-11-25258770

Section 2. Composition / Information on Ingredients

Name of Components	Concentration
Ethion	50.00 % w/w
Other components	50.00 % w/w
Total	100.00% w/w

Section 3. Hazards Identification

Ingestion Harmful if swallowed Skin May cause sensitization by skin contact

Inhalation Moderately toxic. May lead to nausea, dizziness and loss of consciousness

Eye irritation Moderate irritant

Respiratory system The offensive odour of this product may cause nausea Poisoning system

This product is a cholinesterase inhibitor. Principle routes of exposure are skin contact and inhalation. **Poisoning symptoms** typical of organ phosphorus pesticides include nausea,

diarrhoea, dripping nose and mouth, excessive salivation, stomach cramps, excessive sweating, trembling, loss of muscle co-ordination, muscular twitches, weakness, mental confusion, blurred vision, breathing difficulties and rapid pulse.

Section 4. First Aid Measures

Skin Contact : Remove contaminated clothing and shoes immediately. Wash contaminated area with soap or mild detergent and large amount of water until no effects of chemical remains. If symptoms persists get medical help.

Eye Contact : Irrigate the eyes with large amount water or normal saline occasionally lifting upper and lower lids until no evidence of chemical remains and obtain a medical help.

Ingestion : Remove by gastric lavage and catharsis, maintain blood pressure and airway, Give oxygen if respiration is depressed. Do not perform gastric lavage if victim is victim is unconscious. Get medical attention immediately.

Inhalation : Remove the patient from the exposure area to fresh air immediately. If breathing has stopped perform the artificial respiration. Keep person warm and rest. Get medical attention immediately.

Section 5. Fire Fighting Measures

This product is flammable, non-explosive and is combustible. Extinguish warehouse and factory fires using fine-water spray, fog or foam. During a fire, this product may release smoke and hazardous decomposition products. When fighting a major fire, wear a SCBA and structural fire-fighters uniform. Do not allow fire-water to enter drains.

Section 6. Accidental Release Measures

Personal Preparation : Avoid contact with skin, eyes and clothing.

Environmental Precautions : Prevent contamination of soil, drains and surface water.

Method of cleaning : Absorb the material in the sand, soil, diatomaceous earth or suitable absorbent. Place in suitable material and remove to safe place or dispose of in an incinerator approved for chemicals.

Section 7. Handling & Storage

Handling : 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.

Section 8. Exposure Control, Personal Protection

Breathing Protection A respirator is not normally required when handling this substance. Use effective engineering controls to comply with occupational exposure limits.

Eye protection where eye contact is likely, use chemical splash goggles. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Skin Protection Where contact is likely, wear chemical resistant (such as nitrile or butyl) gloves, coveralls, socks and chemical resistant footwear. To overhead exposure, wear chemical resistant headgear.

Ingestion Prevent eating, drinking, tobacco usage and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

Section 9. Physical and Chemical Properties

Appearance / state	:	Light yellow to brown colour liquid
Colour	:	Light yellow to brown colour
Odour	:	Pungent, like garlic or cooked onions
Boiling point	:	>180°C
Vapour pressure	:	1.5 x 10 ⁻⁶ mmHg @ 25°C
Ph	:	NA
Flash Point	:	>48° C
Density	:	1.23 to 1.2350 gm/cc at 30°C
Water Solubility	:	In water 20 mg/L (20°C), readily miscible with most organic solvents

Section 10. Stability & Reactivity

Stability Stable under standard conditions.

Hazardous Polymerization Will not occur. Conditions to avoid Flame, heat, ignition sources and strong oxidizers

Section 11. Toxicological Information

Acute Oral Toxicity- LD ₅₀	Rat: 358 mg/kg
Acute Dermal Toxicity- LD ₅₀	Rat: 3300 mg/kg
Acute Inhalation - LD ₅₀	Rat: >3.0 mg/l Air (4h)
Eye irritation	Moderant Irritating to eyes
Skin Irritation	Slight Irritating to eyes
Skin Sensitization	Not a skin sensitizer

Section 12. Ecological Information

Toxicity to Fishes	LC50 (96 h) for Bluegill sunfish 0.3 mg/l Rainbow trout 0.08 mg/l Crucian carp 0.09 mg/l
Toxicity to Bees	Toxic to bees
Toxicity to Birds	Acute oral LC50 for Mallard ducks: 150 - 612 mg/kg Bobwhite quail: 70 - 200 mg/kg

Section 13. Disposal Consideration

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed on site (by use according to the label) or at an approved waste disposal facility. Further information can be obtained from the EPA or the equivalent state and local agencies.

CONTAINER DISPOSAL: Completely empty bag into application equipment. Check with EPA, State, and local authorities for the current regulations applicable to your area for disposal of waste containers.

Section 14. Transport Information

IMDG Classification

Shipping name : Environmentally hazardous substance, liquid, n.o.s.

Class : 6.1
Packing group : III
UN number : 3018
Marine pollutant : Yes

Section 15. Regulatory Information

United States Sara Title III (Superfund Amendments And Reauthorization Act) 311 Hazard Categories (40 Cfr 370): Immediate, Delayed Section 312 Threshold Planning Quantity (40 CFR 370): The threshold planning quantity (fPQ) for this product, if treated as a mixture, is 10,000 lbs. This product contains the following ingredients with a TPQ of less than 10,000 lbs.: 1000 ethion (1000 lbs.)

Section 313 Reportable Ingredients (40 CFR 372): There are no ingredients in this product which are subject to

Section 313 reporting requirements. SARA TITLE III

Section 302 Extremely Hazardous Substances (40 Cfr 355): Ethion

Section 302.4 Reportable Quantity (40 Cfr 355) Chemical Name Ethion Bq101lbs. CERCLA (Comprehensive Environmental Response Compensation And Liability Act):

Chemical Name Ethion

COMMENTS: Australian Hazard-S?d~ :}~.

EU Risk Phrases:R21-25

EU Symbols: T, Toxic, Skull & Crossbones

EU Safety Advise Phrases:S25-36/37-44

FAO/WHO Classification:Ib, Highly hazardous

Section 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 presented 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 UNITED CHEMICALS, as to the results to be obtained based upon the user's use of the information, nor does UNITED CHEMICALS, assume any liability arising out of user's use of the information.

Safety Division : UNITED CHEMICALS, SAFETY DIVISION

