METHYL PARATHION
4 EC
(Methyl Parathion 4 lb/gallon EC)
Product No.: 28YUSA
Product Name: METHYL PARATHION 4 EC
Active Ingredient: Parathion-methyl
EPA Reg. No.: 67760-43
KEM/September 1999
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1. IDENTIFICATION OF THE SUBSTANCES/PREPARATION AND OF THE COMPANY/UNDERTAKING

2. ACTIVE INGREDIENT:
   CAS Name: Phosphorothioic acid, O,O-dimethyl-O-(4-nitrophenyl) ester
   Active Names: O,O-Dimethyl-O-(4-nitrophenyl) phosphorothioic acid, O,O-Dimethyl-O-(4-nitrophenyl) ester
   CAS No.: 64742-95-6

3. HAZARDS IDENTIFICATION

4. FIRST AID MEASURES

5. FIRE-FIGHTING MEASURES

6. HANDLING AND STORAGE

7. EXPOSURE CONTROLS/PERSONAL PROTECTION

8. MATERIAL SAFETY DATA SHEET UPDATES AVAILABLE AT WWW.GREENBOOK.NET

9. Stability and reactivity
   The product is stable when stored at temperatures not exceeding 25°C. Do not permit the formation of droplets of liquid during storage or disposal.

10. Toxicological information
    Persons working with this product for a longer period should have frequent blood tests of their cholinesterase levels. Do not give morphine or tranquillizers. At first sign of pulmonary edema, the patient should be given supplemental oxygen and treated symptomatically.
    Continuous absorption of Methyl Parathion may occur and relapse may occur after initial improvement. Very close supervision of the patient is indicated for at least 48 hours.

5.1. Personal Protection: Overalls and rubber boots should be worn. Goggles or face shield should be used. The use of a respirator is recommended when respirable dusts, mists or aerosols are generated. This material may be generated in the application of this product.

5.2. Hazardous Decomposition or By-products in a Fire: The essential breakdown products are dimethyl sulfoxide, sulfur dioxide, carbon monoxide, carbon dioxide, phosphorus pentoxide, and nitrogen oxides.

6. ACCIDENTAL RELEASE MEASURES

7.1. Precautions to Be Taken in Handling: In case of contact immediately flush eyes or skin with plenty of water while removing contaminated clothing and shoes. See physician immediately.

7.2. Precautions to Be Taken in Storing: The product is stored stable when kept at temperatures not exceeding 25°C (77°F) and also local heating above this temperature should be avoided. Do not contaminate water, foodstuffs, feed or seed by storage or disposal.

7.3. Fire and Explosion Precautions: —

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Respiratory Protection: In case of insufficient ventilation wear a pesticide respirator approved by the local authorities.

8.2. Work/Hygienic Practices: If handled inside, provide mechanical exhaust ventilation. Persons working with this product for a longer period should have frequent blood tests of their cholinesterase levels. If the cholinesterase level falls below a critical point, no further exposure should be allowed until it has been determined by means of blood tests that the cholinesterase level has returned to normal.

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Keep all unprotected persons and children away from working area.

Before removing gloves, wash them with soap and water. Always wash hands, face and arms with soap and water before smoking, eating or drinking.

After work, take off all work clothes and shoes. Shower, using soap and water. Wear only clean clothes when leaving job. Do not wear contaminated clothing. Wash protective clothing and protective equipment with soap and water after each use. Respirator should be cleaned and filter replaced according to instructions included with respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Physical State: Liquid
9.2. Color: Amber
9.3. Odor: Rancid
9.4. Melting: Below 17°C (63°F)
9.5. Boiling:
Xylene 138-144°C (280-291°F)
Aromatic 150 175-215°C (347-419°F)
Methyl parathion 109°C (228°F) at 1 mm Hg

9.6. Specific Gravity: 1.06 g/ml (8.85 lb/gal)
9.7. Vapor Pressure:
Methyl Parathion 1.72 x 10^-3 mm Hg at 25°C (77°F)
21.8 x 10^-3 mm Hg at 45°C (113°F)
Aromatic 3.8 mm Hg at 38°C (100°F)
9.8 mm Hg at 55°C (131°F)
Xylene 7 mm Hg at 25°C (77°F)

9.9. Viscosity: —
9.9. Solubility in Water:
Methyl Parathion 55-60 mg/ml at 20°C (68°F)
Aromatic 150 Below 0.1% at 20°C (68°F)

9.11. Partition Coefficient n-Octanol/Water: Methyl Parathion 3300
9.12. pH: —
9.13. Flash Point: 50°C (122°F); Pensky-Martens Closed Test
9.14. Autoignition Temperature:
Aromatic 150 Approx. 443°C (800°F)
Xylene 498°C (928°F)
9.15. Flammable Limits:
Aromatic 150 LEL 0.7% (v/v)
Xylene LEL 1% (v/v) UEL 7% (v/v)

10. STABILITY AND REACTIVITY

10.1. Thermal Decomposition:
Methyl Parathion will decompose rapidly when heated to temperatures above 100-120°C (212-248°F), significantly increasing the risk of inducing explosion.

The decomposition is to a considerable extent dependent on time as well as temperature due to exothermic and autocatalytic reactions. The reactions involve rearrangements and polymerization releasing volatile malodorous and inflammable compounds such as dimethyl sulfide.

10.2. Hazardous Decomposition or Byproducts: See 5.2.
10.3. Materials to Avoid: Strong alkalies and strong oxidizing compounds.

11. TOXICOLOGICAL INFORMATION

11.2. Route(s) of Entry:
- Ingestion LD50, oral, rat (M): 13 mg/kg
- Skin LD50, dermal, rat: 662 mg/kg
- Inhalation LC50, inhalation, rat: 0.119 mg/l/4 h

11.3. Irritancy of Material: Slightly irritating to skin and eyes.
11.4. Sensitization of Material: Methyl Parathion is not a skin sensitizer in guinea pigs.
11.5. Carcinogenicity: Methyl Parathion was found not to be carcinogenic in rats or in mice.
11.6. Reproductive Effects: Methyl Parathion had no effect on the reproductive capacity of rats at doses not causing excessive maternal toxicity.
11.7. Teratogenicity: No indications of teratogenicity from Methyl Parathion have been observed in rats and rabbits.
11.8. Mutagenicity: Methyl Parathion shows a low mutagenic potential in vitro, but is considered non-mutagenic in vivo.

12. ECOLOGICAL INFORMATION

The active ingredient Methyl Parathion is readily biodegradable. It undergoes rapid degradation in the environment and without problems in waste water treatment plants. No adverse effects are observed at concentrations up to 100 mg/l in waste water treatment plants. Degradation occurs both aerobically and anaerobically, biologically as well as abiotically.

The product is highly toxic to fish and wildlife. The acute toxicity of the active ingredient Methyl Parathion is:
- Fish 96 h LC50, Rainbow trout (Salmo gairdneri): 3.70 mg/l
- Invertebrates 48 h EC50, Daphnids (Daphnia magna): 7.3 µg/l
- Birds LD50, Mallard: 10.0 mg/kg
- Bees 24 h LD50, worker: 0.04 µg/bee
  honey- bees, topical: 24 h LD50, worker: 0.013
  honey- bees, oral: —

13. DISPOSAL CONSIDERATIONS

13.1. Waste Disposal Method:
Spill and waste disposal procedures approved by state and local authorities must be observed.
Do not contaminate water, foodstuffs, feed or seed by storage or disposal.

13.2. Contaminated Container: Returnable/Refillable Sealed Container: Do not break seals or add any material to the container.
Do not rinse container or empty any residue from container. This container must be returned intact after use to the point of purchase.

14. TRANSPORT INFORMATION

UN CLASSIFICATION
14.1. Name: Organophosphorus Pesticides, Liquid, Toxic, Flammable (Methyl Parathion)
14.2. No.: 2017
14.3. Class: 6.1
14.4. Packaging Group: II
14.5. Primary Hazard: Toxic
14.6. Subsidiary Risk: 3
14.8. US CFR: RQ (100 lbs.)

15. REGULATORY INFORMATION

15.1. IN THE EU:
Index No.: 015-035-00-7 (Methyl Parathion) EC No. (EINECS No.): 206-050-1 (Methyl Parathion) Classification and Labelling (according to 88/379/EEC with amendments) Symbol of Danger: FLAMMABLE

Indication of Danger:

15.2. Threshold Limit Value:

OSHAPEL: 0.2 mg/m³
ACGIH TWA: 0.2 mg/m³
MAC: 0.2 mg/m³
Aroma- tic 150: 100 ppm
Xylene: 100 ppm

Threshold limit values approved by the authorities must, however, be observed.

This product has been classified in accordance with the hazard criteria of the CPR (Controlled Products Regulations) and the MSDS contains all of the information required by the CPR.

16. OTHER INFORMATION

This material should only be used by persons, who have been instructed in all safety precautions required and otherwise are familiar with the content of this data sheet.

IN THE US:
Emergency Medical Telephone Number: 1-800-228-5335, Ext. #153
Other Emergencies: CHEMTREC toll free 1-800-424-9300
Telephone Number for Information: (973) 305-6600

Material Safety Data Sheet according to 91/155/EEC (preparations)/93/112/EEC (substances with amendments).

The information presented herein is believed to be accurate and reliable, but is presented without guarantee or responsibility on the part of Cheminova, Inc.