

MATERIAL SAFETY DATA SHEET

Section 1. Chemical Product and Company Identification

Manufactured in China by: ROTAM AGROCHEMICAL CO., LTD
7/F. Cheung Tat Centre
No. 18, Cheung Lee Street
ChaiWan, Hong Kong

Distributed in the US by: ROTAM NORTH AMERICA, INC
1400 NW 107th Avenue
Suite 310
Miami, FL 33172
Phone: 1 866 927-6826

Emergency number for spills and cleanup: CHEMTREC: 1-800-424-9300

Product Name: NUDRINTM SP Insecticide
Methomyl 90% SP (900g/kg)
(Soluble Powder in Water Soluble Packets)

Product Code: RTFI-003

Chemical Name of Active Ingredient:

S-methyl N- [(methylcarbamoyl)oxy]thioacetimidate (IUPAC)

Methyl N-[[[(methylamino)carbonyl]oxy]ethanimidothioate (CAS)

Chemical Formula of Active Ingredient:

C₅H₁₀N₂O₂S

CAS/EPA/EU Registry Number of Active Ingredient:

16752-77-5 (CAS), 83100-28-83979 (USEPA), 240-815-0 (EEC), 264 (CIPAC)

Section 2. Composition/Information on Ingredients

Component	CAS Number	Content (g/kg)
Methomyl	16752-77-5	Min. 900
Inert ingredients	Not Applicable	Max.100

Section 3. Hazards Identification

DANGER! POISON! Fatal if swallowed. May be fatal if inhaled or gets in eyes. Do not breathe dust.
Do not get in eyes. Avoid contact with clothing.

Section 4. First Aid Measures

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 by a poison control center or doctor. Do not give anything 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 by mouth-to-mouth, if possible. 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.

ATROPINE IS AN ANTIDOTE --SEEK MEDICAL ATTENTION AT ONCE IN ALL CASES OF SUSPECTED POISONING.

If poisoning symptoms appear (see POISONING SYMPTOMS), get medical attention.

POISONING SYMPTOMS — Methomyl poisoning produces effects associated with anticholinesterase activity which may include weakness, blurred vision, headache, nausea, abdominal cramps, discomfort in the chest, constriction of pupils, sweating, slow pulse, muscle tremors. If poisoning symptoms appear, refer to First Aid section and seek medical attention at once.

NOTE TO PHYSICIAN

Probable mucosal damage may contraindicate the use of gastric lavage.

TREATMENT — Atropine sulfate should be used for treatment. Administer repeated doses, 1.2 to 2.0 mg. intravenously every 10 to 30 minutes until full atropinization is achieved. Maintain atropinization until the patient recovers. Artificial respiration or oxygen may be necessary. Allow no further exposure to any cholinesterase inhibitor until recovery is assured.

Do not use 2-PAM for exposure to NUDRIN™ SP Insecticide alone. However, for exposure to combinations of NUDRIN™ SP Insecticide and organophosphorous insecticides, 2-PAM may be used as required to supplement the atropine sulfate treatment. Do not use morphine.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

You may also contact the National Poison Control Center 24-hr Emergency Hotline at: 1-800-222-1222.

Section 5. Fire Fighting Measures

Fire and Explosion Hazards: Negligible fire and explosion hazard.

Firefighting Media: Foam, dry chemical or water spray to extinguish fire.

Firefighting Precaution: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. Keep unnecessary people away. Use as little water as possible. Dike area of fire to prevent material run-off. Decontaminate emergency personnel with soap and water before leaving the fire area. Avoid breathing dusts, vapors and fumes from burning materials. Control run-off water.

Section 6. Accidental Release Measures

In case materials are released, use suitable protective equipment (Section 8) and follow all fire prevention procedures (Section 5). Keep unnecessary persons away. Isolate hazard area and deny entry. Move containers away from spill to a safe area. Do NOT wash away into sewer. Sweep spilled substance into sealable containers; if appropriate, moisten first to prevent dusting. Carefully collect remainder, and then remove to safe place for disposal.

Section 7. Handling and Storage

Handling Precautions: This product may be fatal if swallowed; poisonous if inhaled. Avoid contact with eyes, skin or clothing. Do not breathe dust. Wash thoroughly with soap and water after handling.

Storage Precautions: Store in original container only. Avoid store with foodstuff or animals feed. Store in dry and well-ventilated conditions.

Section 8. Exposure Controls/Personal Protection

ENGINEERING CONTROL STATEMENTS

Human flaggers must be in enclosed cabs.

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR part 170.240 (d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS. The enclosed cabs must be used in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR part 170.240 (d)(4-6)]. The handler PPE requirements may be reduced or modified as specified in the WPS.

Water soluble packets when used correctly qualify as a closed loading system under the WPS. Handlers handling this product while it is enclosed in intact water-soluble packets are permitted to wear long-sleeved shirt, long pants, shoes plus socks, chemical-resistant gloves, and chemical-resistant apron, provided the other required PPE is immediately available in case the bag is opened.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Mixers, loaders, applicators, cleaners, repairers of application equipment, and others exposed to the concentrate must wear:

- Long sleeve shirt and long pants.
- Chemical-resistant gloves, such as barrier laminate or butyl rubber.
- Socks and chemical resistant footwear.
- Protective eyewear.
- Chemical resistant apron.
- Respirator with either 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 organic vapor (OV) cartridge or a canister with any R, P, or HE prefilter.
- Discard clothing or 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.

Section 9. Physical and Chemical Properties

Appearance	White powder
Odor	Slightly sulfurous odor
Bulk Density	Approx. 0.6g/ml (25°C)
Water Solubility	Disperse in water

Section 10. Stability and Reactivity

Stability: Stable at normal temperatures and storage conditions.

Incompatibilities: Avoid mixed with highly reactive chemicals such as strong acid, strong base or strong oxidizing agent.

Hazard Decomposition: Thermal decomposition and combustion will product hazardous gases.

These may include sulfur oxides, methyl isocyanate and hydrogen cyanide.

Hazard Polymerization: Will not occur.

Section 11. Toxicological Information

Acute Oral Toxicity: LD₅₀ for rats 14.2 mg/kg (male); 7.14 mg/kg (female)

Acute Dermal Toxicity: LD₅₀ for rabbits >5050 mg/kg

Acute Inhalation Toxicity: LC₅₀ (4 h) for rats 0.114-0.299 mg/l

Skin Irritation: No irritating to skin of rabbits.

Eye Irritation: Slightly irritating to rats.

Section 12. Ecological Information

It is toxic to aqueous organism and wild avifauna. Referenced technical ecological toxicology data list as below:

Birds LD₅₀ for mallard ducks 15.9 mg/kg, pheasants 15.4 mg/kg.

LC₅₀ (8 d) for Pekin ducks 1890, bobwhite quail 3680 mg/kg diet.

Fish LC₅₀ (96 h) for rainbow trout 3.4 mg/l, bluegill sunfish 0.9 mg/l

Bees Toxic to bees. LD₅₀ (contact) 0.1 µg/bee

Environmental Fate:

Animals In rats, methomyl was rapidly converted to methomyl methylol, oxime, sulfoxide and sulfoxide oxime; these unstable intermediates were converted to acetonitrile and CO₂, which were eliminated primarily via respiration and in the urine. Metabolism of carbamate insecticides is reviewed.

Plants DT₅₀ following leaf application c. 3-5 d. Rapidly degraded to CO₂ and acetonitrile, with incorporation into natural plant components.

Soil/Environment

Rapidly degraded in soil. DT₅₀ in groundwater samples < 0.2 d. K_{oc} 72.

Section 13. Disposal Considerations

Disposal of product would be treated, stored, transported, and disposed of according to the local waste regulation authority. Do not flush to surface water or sanitary sewer system.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish, aquatic invertebrates, and mammals. 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 may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwater or rinsate.

This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area. This chemical is known to leach through soil into groundwater under certain conditions as a result of label use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

This chemical can contaminate surface water through spray drift. Under some conditions, it may also have a high potential for runoff into surface water for several days to weeks after application. These include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, and areas overlaying extremely shallow groundwater, areas with in-field canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and areas over-laying tile drainage systems that drain to surface water.

Section 14. Transport Information

US DOT Classification

Proper Shipping Name: CARBAMATE PESTICIDE, SOLID, TOXIC

Methomyl 900g/kg Soluble Powder

Class: 6.1

UN No.: 2757

Packaging Group II

Marine Pollutant P

IMO Classification

Proper Shipping Name: CARBAMATE PESTICIDE, SOLID, TOXIC

Methomyl 900g/kg Soluble Powder

Class: 6.1

UN No.: 2757

Packaging Group II

Marine Pollutant P

Section 15. Regulatory Information

USEPA Registered Company Address:

Rotam Agrochemical Company Ltd., 4032 Crockers Lake Blvd., Suite 818, Sarasota, FL 34238

Product Signal Word: DANGER! POISON!

RESTRICTED USE PESTICIDE

EPA Reg. No. : 83100-28-83979

European/International Regulation:

Hazard Symbols:

T+ Very Toxic

N Dangerous to environment

Risk Phrases:

R 28 Very toxic if swallowed.

R 50 Very toxic to aquatic organisms

R 53 May cause long-term adverse effects in the aquatic environment.

Safety Phrases:

S 1/2 Keep locked-up and out of reach of children

S 13 Keep away from food, drink and animal feeding stuffs

S 20/21 When using do not eat or drink or smoke.

S 22 Do not breathe dust.

S 24/25 Avoid contact with skin and eyes.

S 36/37 Wear suitable protective clothing and gloves.

S 45 In case of accident or if you feel unwell, seek medical advice immediately
(show the label where possible).

Section 16. Other Information

Disclaimer: The information provided by Rotam Agrochemical Co., Ltd contained herein is given in good faith and to the best of our knowledge. However, no warranty is expressed or implied.

Prepared by: Technical Development Department

Updated: