Material Safety Date Sheet (MSDS)
Oxamyl 24 SL

IDENTIFICATION OF THE SUPPLIER:

AGRO CHEMICALS INDUSTRIES LTD
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PRODUCT IDENTIFICATION:

Common Name: oxamyl 24% w/v
Trade Name: oxanem 24 SL
Type of formulation: Soluble Liquid (SL)
Chemical Name: N,N-dimethyl-2-methylcarbamoyloxyimino-2-(methylthio)acetamide
Chemical Formula: $C_7H_{13}N_3O_3S$
Molecular Weight: 219.3

PRODUCT COMPOSITION:

Active ingredient:	***% w/v***	***CAS#***
Oxamyl	24%	*[23135-22-0]*
Inert material:		
Bioactive	1.4%	--
Methanol	up to 100%	*[67-56-1]*

HAZARDS IDENTIFICATION:

Emergency Overview
DANGER-POISON! Fatal if swallowed. May be fatal if inhaled. Do not breathe spray mist. Causes moderate eye irritation. Avoid contact with eyes or clothing. Contains methanol which may cause blindness.

Potential Health Effects

Based on animal data, eye contact with Vydate L may cause eye irritation with discomfort, tearing, or blurring of vision.

OXAMYL

Based on animal data, skin contact, eye contact, inhalation or ingestion exposures to Oxamyl may cause acute cholinesterase depression characterized by weakness, nausea, headache, abdominal cramps, excessive seating, salivation, tearing, constricted pupils, blurred vision, muscle twitching and confusion. Higher exposures may lead to loss of consciousness, convulsions, or severe respiratory depression.

Carcinogenicity Information

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

FIRST-AID MEAUSRES:

IF SWALLOWED: Call a poison control center or doctor immediately for treatment advice. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth 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.

IF ON SKIN OR CLOTHING: 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 symptoms appear (see SYMPTOMS), get medical attention.

SYMPTOMS--Oxamyl 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.

Notes to Physicians

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

FIRE-FIGHING MEASURES: -

Flammable Properties
Flash Point: 30^{o} C (73 F)
Method: Closed Cup
May be ignited by heat, sparks, or open flame.
Flammable liquid. Vapor forms explosive mixture with air.
Heating can release vapors which can be ignited.
Extinguishing Media
Water Spray, Foam, Dry Chemical, CO_2.
Fire Fighting Instructions
Evacuate personnel to a safe area. Keep personnel removed and upwind of fire. Wear self-contained breathing apparatus. Wear full protective equipment. Shut off source of fuel, if possible and without risk. Use water spray. Cool tank/container with water spray. Runoff from fire control may be a pollution hazard.
If area is exposed to fire and conditions permit, let fire burn it out. Burning chemicals may produce by-products more toxic than the original material. If product is on fire, wear self-contained breathing apparatus and full protective equipment.
Use water spray. Control runoff.

ACCIDENTAL RELEASE:

Safeguards (Personnel)
NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.
Evacuate personnel, thoroughly ventilate area, and use self-contained breathing apparatus. Keep upwind of leak - evacuate until gas has dispersed.
Emergency Response - Chemical resistant coveralls, waterproof gloves, waterproof boots and face/eye protection.
If dusting occurs, use NIOSH approved respirator protection.
Initial Containment
Remove source of heat, sparks, flame, impact, friction or electricity. Dike spill. Prevent material from entering sewers, waterways, or low areas.

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Follow applicable Federal, State/Provincial and Local laws/ regulations.
Spill Clean Up
Soak up with sawdust, sand, oil dry or other absorbent material.
Shovel or sweep up. Never return to container for reuse. Scoop into bags or boxes with plastic or aluminum shovel.
Neutralize with solid sodium hydroxide at rate of 3 lb per gallon spilled.

HANDLING AND STORAGE:

Handling (Personnel)
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 personal protective equipment immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.
Handling (Physical Aspects) Flammable. Keep away from heat, sparks, and open flame.
Keep container closed. Use with adequate ventilation.
Storage
Do not contaminate water, food, or feed by storage or disposal. Do not subject to temperatures below 32°F.
Store product in original container only. Not for use or storage in or around the home. Keep out of reach of children.

PERSONAL PROTECTION/SAFTETY:

Personal Protective Equipment
Some materials that are chemical resistant to this product are listed below. If you want more options follow the instructions for Category C on the EPA chemical resistance category selection chart.
Mixers, loaders, applicators and other handlers must wear:
Coveralls over long-sleeved shirt and long pants.
- Chemical-resistant gloves, such as barrier laminate or butyl rubber or neoprene rubber or polyvinyl chloride (PVC) or viton or nitrile rubber.
- Chemical-resistant footwear, plus socks.
- Protective eyewear.
- Chemical-resistant headgear for overhead exposure.
- Chemical-resistant apron when cleaning equipment, mixing or loading.

- A 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 organic vapor (OV) cartridge or canister with any R, P or HE profiler.
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.
PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:
- Coveralls.
- Chemical-resistant gloves made of any waterproof material.
- Socks and shoes.

STABILITY AND REACTIVITY

Chemical Stability:
Stable at normal temperatures and storage conditions.
Incompatibility with Other Materials:
Incompatible with strong acids or bases (slowly hydrolyzes).
Decomposition:
Decomposition will not occur.
Polymerization:
Polymerization will not occur.

PHYSICAL AND CHEMICAL DATA :

State: liquid
Color: colorless to light yellow
Odor: Slight Sulfurous.
Density: 0.98 g/ml. at 25°C

TOXICOLOGICAL INFORMATION:

WHO (a.i.) Ib; EPA (formulation) I

Acute toxicity (end product)

Oral LD 50 (rat): 10 mg/kg in males, 9 mg/kg in females (highly toxic)

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Dermal LD 50 (rat): male rabbits >5027, female rabbits >2000 mg/kg
Inhalation LC 50 (rat): 0.3009 mg/L (highly toxic)
Eye Irritation (rabbit) – Slight irritant
Skin Irritation (rabbit) – Not a skin irritant
Sensitization (guinea pig) – Not a skin sensitizer

ECOLOGICAL INFORMATION: -

As Oxamyl technical:

ENVIRONMENTAL FATE

Animals In rats, oxamyl was hydrolysed to an oximino metabolite (methyl N-hydroxy-N',N'-dimethyl-1-thiooxamimidate) or converted enzymically via N,N-dimethyl-1-cyanoformamide to N,N-dimethyloxamic acid. Conjugates of the oximino compound, the acid, and their monomethyl derivatives constituted over 70% of the metabolites excreted in the urine and faeces

Plants In plants, oxamyl hydrolyses to the corresponding oximino compound which, in turn, conjugates with glucose. Total breakdown into natural products has been demonstrated

Soil/Environment Degraded rapidly in soil, DT50 c. 7 d. DT50 in groundwater (Lab. study) 20 d (anaerobic), 20-400 d (aerobic). Koc 25.

Birds Acute oral LD50 for male mallard ducks 3.83, female mallard ducks 3.16 mg/kg. Dietary LC50 (8 d) for bobwhite quail 340, mallard ducks 766 ppm.
Fish LC50 (96 h) for bluegill sunfish 5.6, goldfish 27.5, rainbow trout 4.2 mg/l.
Daphnia LC50 (48 h) 0.319 mg/l.
Algae EC50 (72 h) 3.3 mg/l (tech.).
Bees Toxic to bees; LD50 (oral) 0.078-0.11 µg/bee (as end product); (contact) 0.27-0.36 µg/bee.
Worms LC50 (14 d) 112 ppm.

DISPOSAL CONSIDERATION:

Waste Disposal
Do not contaminate water, food, or feed by disposal.

Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container Disposal

For Metal Containers (non aerosol): 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 the State and local authorities.
For Plastic Containers: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

TRANSPORT INFORMATION:

Shipping Information
DOT/IMO

Proper Shipping Name:	CARBAMATE PESTICIDE,LIQUID,TOXIC,FLAMMABLE (Oxamyl,Methanol)
Hazard Class:	6.1
UN No. :	UN 2991
Packing Group:	II
Subsidiary Hazard Class:	3
Marine Pollutant:	MARINE POLLUTANT (Oxamyl)-Water or Bulk
Reportable Quantity:	Yes (if 5,000 or more pounds methanol in a single container)

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