

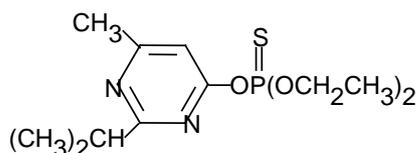
## MATERIAL SAFETY DATA SHEET

### Super pulmic 60% EC

### (Diazinon 60%)

#### SECTION 1. IDENTIFICATION OF THE SUBSTANCE

Trade name: super pulmic  
 Common Name: Diazinon  
 Form: EC  
 Chemical Name: O,O-diethyl O-2-isopropyl-6-methylpyrimidin-4-yl phosphorothioate  
 Formula: C<sub>12</sub>H<sub>21</sub>N<sub>2</sub>O<sub>3</sub>PS  
 Mol. wt: 304.3  
 Structure:



#### SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

##### Physical And Chemical Properties:

**Chemical Name:** O,O-diethyl O-2-isopropyl-6-methylpyrimidin-4-yl phosphorothioate  
**CAS NO :** 333-41-5  
**Appearance:** Homogeneous fine powder  
**Flash Point** >62°C  
**Flammability** Non out-flammable  
**Vapor pressure:** 2.0mmHg (25 °C)  
**Corrosion:** Non-corrosive  
**Solubility:** In water 0.81mg/l (25 °C) (tech) .  
**Storage Stability** Stable for at least 2 years under optimum conditions of storage.

**Heat Stability (2 Weeks at 54°C)** All chemical and physical properties of the product are comply with its specification after 14 days at 52 ± 2°C

### **Composition properties of formulated product 10% DP :**

Appearance : Homogeneous fine powder

<b>Substance</b>	<b>Conc.</b>	<b>Uses</b>
<b>Active ingredient</b>		
<b>Diazinon:</b>	60%	To control of Scorpions 10-12 gm/m <sup>2</sup>
<b>Inert ingredient</b>		
Carrier material	40%	
Total	100%	

### **SECTION 3. HAZARDS IDENTIFICATION**

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#### **EFFECTS OF OVEREXPOSURE**

Symptoms of cholinesterase inhibition can be occurred, such as headache, dizziness, blurred vision, weakness, nausea, cramps, diarrhea, discomfort in the chest, nervousness, sweating, miosis (pinpoint pupils), tearing, salivation, pulmonary edema, uncontrollable muscle twitches, convulsions, cyanosis, coma, and loss of reflexes and sphincter control. Eye and skin contact can cause irritation.

### **SECTION 4.FIRST AID MEASURES**

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If poisoning is suspected, immediately contact a physician, the nearest hospital or the nearest Poison Control Center. Tell the person contacted the complete product name, and the type and amount of exposure. Describe any symptoms and follow the advice given.

#### **Ingestion:**

If victim is fully conscious, immediately give a large quantity of water to drink and induce vomiting. Repeat until vomit fluid is clear.

Never give anything by mouth to an unconscious person.

Avoid contact with contaminated skin or clothing - wear rubber gloves.

#### **Eye Contact:**

Immediately rinse eyes with a large amount of running water.

Hold eyelids apart to rinse the entire surface of the eyes and lids.

Do not apply any medicating agents except on the advice of a physician.

#### **Skin Contact:**

Wash with plenty of soap and water, including hair and under fingernails.

Do not apply any medicating agents except on the advice of a physician.

Remove contaminated clothing and decontaminate prior to use.

**Inhalation:**

Move victim from contaminated area to fresh air.  
Apply artificial respiration if necessary, preferably by mechanical means.  
Avoid mouth to mouth resuscitation.

**Notes to Physician**

This product is an organophosphate (cholinesterase inhibiting) insecticide. Atropine is antidotal and should be given i.v. in multiple doses as necessary until the patient is atropinized. In severe cases, 2- PAM may be given provided therapy begins within 24 hours of exposure.

Monitor serum and RBC cholinesterase.

Morphine, theophylline, aminophylline, phenothiazines, reserpine, furosemide or ethacrynic acid are contraindicated in organophosphate poisonings.

Administer i.v. fluids cautiously if needed to correct dehydration.

**Medical condition likely to be aggravated by exposure**

Exposure to cholinesterase inhibitors should be restricted in persons with hemolytic anemias or preexisting cholinesterase depression. Individuals with pre-existing respiratory disorders should use extra care in handling this product.

**SECTION 5.FIRE FIGHTING MEASURES**

<b>Flammability:</b>	Not auto flammable
<b>Autoignition Temperature:</b>	>400 °C
<b>Flash point:</b>	>62 °C
<b>Extinguishing media:</b>	Foam, Carbon dioxide, Dry chemical
<b>Thermal decomposition products:</b>	Non known
<b>Special fire fighting methods:</b>	Use self contained breathing apparatus

**Unusual Fire, Explosion and Reactivity Hazards**

Thermal decomposition products include, but are not limited to, various aliphatic organophosphates, substituted pyrimidines and hydrogen cyanide.

**In case of Fire**

Use dry chemical, foam or CO<sub>2</sub> extinguishing media.

Wear full protective clothing and self-contained breathing apparatus.

Evacuate nonessential personnel from the area to prevent human exposure to fire,

smoke, fumes or products of combustion.

Prevent use of contaminated buildings, area and equipment until decontaminated.

## **SECTION 6.ACIDENTAL RELEASE MEASURES**

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### **ACTION TO TAKE FOR SPILLS:**

In case of spills it is important to take all steps necessary to:

- Avoid eye and skin contact.
- Avoid contamination of waterways.

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).
5. Shovel the absorbed spill into drums and top with hydrated lime.
6. Disposal of the absorbent material will depend on the extent of the spill.  
For quantities up to 50L of product bury in a secure land fill site.  
For quantities greater than 50L seek advice from the manufacturer before attempting disposal. Contain in a secure location until disposal method is established.
7. Decontaminate spill area with hydrate lime scattered over the spill prior to rinsing off with water.

## **SECTION 7.HANDLING AND STORAGE**

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Store the material in a well-ventilated, secure area, out of the reach of children and domestic animals.

Do not store food, beverages or tobacco products in the storage area.

Prevent eating, drinking, tobacco usage, and cosmetic application in areas where there is a potential for exposure to the material.

Always wash thoroughly after handling.

## **SECTION 8.EXPOSURE CONTROL/PERSONAL PROTECTION**

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### **EXPOSURE GUIDELINES:**

Exposure values at the TWA (Time Weighted Average) means the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. There is a blanket recommendation of 10mg/m<sup>3</sup> for inspirable dusts or mists when limits have not otherwise been established. ACGIH TLV: 0.1mg/Cu metre STEL 0.3mg/Cu metre

### **ENGINEERING CONTROLS:**

In industrial situations, concentration values below the TWA value should be maintained. Values may be reduced by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods. If you believe air borne concentrations of mists, dusts or vapours are high, you are advised to modify the process or environment to reduce the problem.

## **RECOMMENDATIONS FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS:**

Avoid skin and eye contact and inhalation of vapour. Wear overalls, chemical goggles and impervious gloves. Use adequate ventilation. Eye washing and shower facilities available.

### **EYE / FACE PROTECTION:**

Eye protection should be worn when splashing is possible. Wear splash proof goggles or a full-face shield. Consult AS 1336 and 1337.

### **SKIN PROTECTION:**

Wear chemical resistant PVC or nitrile gloves. For help in selecting suitable gloves consult AS 2161. Wear cotton overalls buttoned to the neck and wrist. Wear a washable hat. For help in selecting suitable clothing consult AS 2919. For help in selecting boots consult AS/NZS 2210.

### **RESPIRATORY PROTECTION:**

Do not breathe vapour/spray/fumes. Use an organic-chemical cartridge respirator when working in poorly ventilated areas or where there is potential for spray mist, splashing or vapours. Consult AS 1715

### **APPLICATIONS AND ALL OTHER HANDLERS:**

After handling this product always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

## **SECTION 9. STABILITY AND REACTIVITY**

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**Chemical Stability:** Stable at normal temperatures and storage conditions.

**Condition to avoid:** Extremely heat, unstable above 50°C

**Materials to avoid:** Strong oxidizers, acids, bases

**hazardous polymerization:** This product is unlikely to spontaneously polymerise.

### **Hazardous decomposition products:**

An impurity of toxicological concern, thionotetraethyl-pyrophosphate (O,S-TEPP) may be formed when diazinon-containing products are exposed to trace amounts of water.

## SECTION 10. TOXICOLOGICAL INFORMATION

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### Acute Toxicity/Irritation Studies

**Ingestion:** Slightly toxic

Oral LD50 (Rat) 1,960 mg/kg body weight

**Dermal:** Slightly toxic

Dermal LD50 (Rabbit) >2,020 mg/kg body weight

**Inhalation:** Slightly toxic

Inhalation LC50 3 mg/L air – 4 hours

**Eye Contact:** Mildly irritating (Rabbit)

**Skin Contact:** Mildly irritating (Rabbit)

**Skin Sensitization:** Not a sensitizer (Guinea Pig)

**Chronic/Subchronic Toxicity Studies:** Diazinon – Cholinesterase inhibition

**Other:** Non-mutagenic, non-teratogenic; no adverse effect on reproductive performance. Not neurotoxic.

**Toxicity class:** WHO (a.i.) II; EPA II

## SECTION 11. ECOLOGICAL INFORMATION

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### Summary of Effects:

Diazinon is highly toxic to birds and aquatic organisms.

Avoid exposure to waterfowl.

### Eco-Acute Toxicity:

Rainbow trout 96-hour LC50: 1.8 mg AI/L

Bluegill sunfish 96-hour LC50: 0.21 mg AI/L

Daphnia Magna 48-hour LC50: 0.0011 mg AI/L

Bobwhite Quail Oral LD50: 5.2 mg/kg

Mallard Duck Oral LD50: 1.44 mg/kg

Bobwhite Quail 8 day dietary LC50: 235 ppm

Mallard Duck 8 day dietary LC50: 33 ppm

### Eco-Chronic Toxicity:

Fish (Fathead Minnow) Early life stage MATC >0.092 and <0.17 mg/L

Invertebrate (Daphnia Magna) life cycle MATC >0.00017 and <0.00032 mg/L

Mallard reproduction NOEC 10 ppm (ChE inhib., <5ppm)

Bobwhite reproduction NOEC 40 ppm (ChE inhib., <10ppm)

**Environmental Persistence/Mobility:**

Degrades rapidly in water, in the dark at pH 5 ( $t_{1/2} = 12$  days), more slowly at pH 7 and 9 ( $t_{1/2} = 138$  days and 77 days, respectively). Degrades more rapidly in the light, in soil ( $t_{1/2} = 2.5$  days) than in water ( $t_{1/2} \sim 25$  days @ pH 7).

Degrades under aerobic and anaerobic conditions ( $t_{1/2} \sim 31-34$  days).

Mobility varies from very slight, depending on the soil type ( $K_{oc} = 25$  to 2300).

Some bioaccumulation in fish ( $BCF = 500X$ , whole fish).

**SECTION 12. DISPOSAL INSTRUCTION**

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**DISPOSAL METHOD:**

Dispose of empty, used containers by;

(a) Triple rinsing with water. Add the rinsings to the tank mix or dispose of rinsate in a disposal pit away from desirable plants and roots, and watercourses. On-site disposal of undiluted product is unacceptable.

(b) Breaking, crushing or puncturing the containers to prevent reuse.

(c) Disposing of in a local authority, bury landfill site that does not burn its refuse. If there is no local authority landfill readily available in your area, bury the containers under at least 50cm of soil at a licensed/approved disposal site. DO NOT burn empty containers or product.

**SECTION 13. TRANSPORT INFORMATION**

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**DOT Classification:**

RQ, Organophosphorus Pesticide, solid, Toxic, Flammable, (Diazinon), 6.1, UN3017, PG III, NAERG #131, (Add "Marine Pollutant" if shipped by water)

**SECTION 14. REGULATORY INFORMATION**

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**WHO HAZARD CLASS: II**

**POISON SCHEDULE: 6**

**FLAMMABILITY: Non-flammable.**

**RISK PHRASES:**

Toxic in contact with skin.

Toxic if swallowed

**SAFETY PHRASES:**

After contact with skin wash immediately with soap and water.

Wear suitable protective clothing and gloves.

If you feel unwell, contact doctor or Poisons Information immediately (show label if possible)

Read and follow all label directions.

**SECTION 15. OTHER INFORMATION**

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The data given here is based on current knowledge and experience. The purpose of this safety data sheet is to describe the products in terms of their safety requirements.

Use according to label instructions.