

Material Safety Data Sheet

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Version 1.3

According to 91/155/EEC

1 - Product and Company Information

Product Name	DIAZINON PESTANAL, 250 MG
Product Number	45428
Company	Sigma-Aldrich Pte Ltd #08-01 Citilink Warehouse Singapore 118529 Singapore
Technical Phone #	65 271 1089
Fax	65 271 1571

2 - Composition/Information on Ingredients

Product Name	CAS #	EC no	Annex I Index Number
DIAZINON	333-41-5	206-373-8	015-040-00-4

Formula	C12H21N2O3PS
Molecular Weight	304.3 AMU
Synonyms	Antigal * Bassadinon * Basudin S * Compass * Dacutox * Dassitox * Dazzel * Delzinon * O,O-Diaethyl-O-(2-isopropyl-4-methyl-pyrimidin-6-yl)-monothiophosphat (German) * O,O-Diaethyl-O-(2-isopropyl-4-methyl)-6-pyrimidyl-thionophosphat (German) * Diazinon (ACGIH) * Diazinone * Dicid * O,O-Diethyl-O-(2-isopropyl-4-methyl-pyrimidin-6-yl)-monothiofosfaat (Dutch) * O,O-Diethyl-O-(2-isopropyl-4-methyl-6-pyrimidinyl)-phosphorothioate * O,O-Diethyl O-(2-isopropyl-6-methyl-4-pyrimidinyl)phosphorothioate * O,O-Diethyl-O-(2-isopropyl-4-methyl-6-pyrimidyl)phosphorothioate * O,O-Diethyl O-(2-isopropyl-4-methyl-6-pyrimidyl)thionophosphate * Diethyl 4-(2-isopropyl-6-methylpyrimidinyl)phosphorothionate * O,O-Diethyl O-6-methyl-2-isopropyl-4-pyrimidinylphosphorothioate * O,O-Diethyl-O-(2-isopropyl-4-methyl-pyrimidin-6-yl)-monothiofosfato (Italian) * Dimpylate * Dizictol

3 - Hazards Identification

SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT

Harmful if swallowed. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

4 - First Aid Measures

AFTER INHALATION

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

AFTER SKIN CONTACT

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

AFTER EYE CONTACT

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

AFTER INGESTION

If swallowed, wash out mouth with water provided person is conscious. Call a physician immediately.

5 - Fire Fighting Measures

EXTINGUISHING MEDIA

Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

SPECIAL RISKS

Specific Hazard(s): Emits toxic fumes under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

6 - Accidental Release Measures

PERSONAL PRECAUTION PROCEDURES TO BE FOLLOWED IN CASE OF LEAK OR SPILL
Evacuate area.

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

ENVIRONMENTAL PRECAUTION(S)

Avoid contaminating water supply. Avoid contaminating sewers and waterways with this material.

METHODS FOR CLEANING UP

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

7 - Handling and Storage

HANDLING

Directions for Safe Handling: Do not breathe dust. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

STORAGE

Conditions of Storage: Keep tightly closed.
Store at 2-8°C

8 - Exposure Controls / Personal Protection

ENGINEERING CONTROLS

Use only in a chemical fume hood. Safety shower and eye bath.

GENERAL HYGIENE MEASURES

Wash contaminated clothing before reuse. Wash thoroughly after handling.

EXPOSURE LIMITS - DENMARK

Source	Type	Value
OEL	TWA	0.1 mg/m3

Remarks: H

EXPOSURE LIMITS - GERMANY

Source	Type	Value
TRGS 900	OEL	0.1 mg/m3, E

Remarks: 4

Remarks: H,Y

EXPOSURE LIMITS - NORWAY

Source	Type	Value
	OEL	0.1 mg/m3

Remarks: H

EXPOSURE LIMITS - SWITZERLAND

Source	Type	Value
OEL	OEL	0.1 mg/m3

Remarks: E H C

EXPOSURE LIMITS - UNITED KINGDOM

Source	Type	Value
OEL	OEL	0.1 mg/m3
OEL	STEL	0.3 mg/m3

Remarks: Skin

PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: Government approved respirator.

Hand Protection: Compatible chemical-resistant gloves.

Eye Protection: Chemical safety goggles.

9 - Physical and Chemical Properties

Appearance	Physical State: Solid	
Property	Value	At Temperature or Pressure
pH	N/A	
BP/BP Range	N/A	
MP/MP Range	N/A	
Flash Point	104.4 °C	Method: closed cup
Flammability	N/A	
Autoignition Temp	> 260 °C	
Oxidizing Properties	N/A	
Explosive Properties	N/A	
Explosion Limits	N/A	
Vapor Pressure	N/A	
SG/Density	N/A	
Partition Coefficient	N/A	
Viscosity	N/A	
Vapor Density	N/A	
Saturated Vapor Conc.	N/A	
Evaporation Rate	N/A	
Bulk Density	N/A	
Decomposition Temp.	N/A	

Solvent Content	N/A
Water Content	N/A
Surface Tension	N/A
Conductivity	N/A
Miscellaneous Data	N/A
Solubility	N/A

10 - Stability and Reactivity

STABILITY

Stable: Stable.

Materials to Avoid: Strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide.

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

11 - Toxicological Information

RTECS NUMBER: TF3325000

ACUTE TOXICITY

LD50
Oral
Rat
66 mg/kg

LC50
Inhalation
Rat
3,500 mg/m3
4H

LD50
Skin
Rat
180 mg/kg
Remarks: Biochemical:Enzyme inhibition, induction, or change in blood or tissue levelsTrue cholinesterase.

LD50
Intraperitoneal
Rat
65 MG/KG

LD50
Intratracheal
Rat
210 MG/KG

LD50
Oral
Mouse
17 mg/kg

LC50
Inhalation
Mouse
1,600 mg/m3

4H

LD50

Skin

Mouse

2750 mg/kg

Remarks: Biochemical:Enzyme inhibition, induction, or change in blood or tissue levelsTrue cholinesterase.

LD50

Intraperitoneal

Mouse

33 MG/KG

LD50

Subcutaneous

Mouse

58 MG/KG

Remarks: Biochemical:Enzyme inhibition, induction, or change in blood or tissue levels: Reactivates cholinesterase.

LD50

Intravenous

Mouse

180 MG/KG

LD50

Oral

Rabbit

143 mg/kg

LD50

Skin

Rabbit

3600 mg/kg

LD50

Oral

Pig

320 mg/kg

LD50

Skin

Pig

633 mg/kg

LD50

Oral

Guinea pig

250 mg/kg

LC50

Inhalation

Guinea pig

5,500 mg/m3

4H

LD50

Oral

Pigeon

3.16 mg/kg

LD50
Oral
Chicken
8.4 mg/kg

LD50
Oral
Quail
4.21 mg/kg

LD50
Oral
Duck
3.5 mg/kg

LD50
Oral
Bird (wild)
2 mg/kg

IRRITATION DATA

Skin
Rabbit
500 mg
Remarks: Open irritation test

Eyes
Rabbit
100 mg
Remarks: Severe irritation effect

ROUTE OF EXPOSURE

Skin Contact: May cause skin irritation.
Skin Absorption: Toxic if absorbed through skin.
Eye Contact: May cause eye irritation.
Inhalation: Toxic if inhaled. Material may be irritating to
mucous membranes and upper respiratory tract.
Ingestion: Toxic if swallowed.

CHRONIC EXPOSURE - MUTAGEN

Human
4 MG/L
Cell Type: lymphocyte
Micronucleus test

Human
500 UG/L
Cell Type: lymphocyte
Other mutation test systems

Human
500 UG/L
Cell Type: lymphocyte
Cytogenetic analysis

Rat
11 UG/PLATE
Cell Type: Embryo
Morphological transformation.

Mouse
60 MG/L
Cell Type: lymphocyte
Mutation in mammalian somatic cells.

Hamster
100 MG/L
27H
Cell Type: lung
Cytogenetic analysis

CHRONIC EXPOSURE - TERATOGEN

Species: Rat
Dose: 26400 UG/KG
Route of Application: Oral
Exposure Time: (12-15D PREG)
Result: Specific Developmental Abnormalities: Urogenital system.

Species: Rat
Dose: 45 MG/KG
Route of Application: Oral
Exposure Time: (8-12D PREG)
Result: Specific Developmental Abnormalities: Musculoskeletal system.

Species: Rat
Dose: 100 MG/KG
Route of Application: Intraperitoneal
Exposure Time: (11D PREG)
Result: Specific Developmental Abnormalities: Urogenital system.

Species: Rat
Dose: 200 MG/KG
Route of Application: Intraperitoneal
Exposure Time: (11D PREG)
Result: Effects on Embryo or Fetus: Extra embryonic structures (e.g., placenta, umbilical cord). Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants). Effects on Fertility: Litter size (e.g.; # fetuses per litter; measured before birth).

Species: Mouse
Dose: 189 MG/KG
Route of Application: Oral
Exposure Time: (1-21D PREG)
Result: Specific Developmental Abnormalities: Endocrine system.

Species: Mouse
Dose: 210 UG/KG
Route of Application: Oral
Exposure Time: (1-21D PREG)
Result: Specific Developmental Abnormalities: Immune and reticuloendothelial system. Effects on Newborn: Delayed effects.

Species: Rabbit
Dose: 130 MG/KG
Route of Application: Oral
Exposure Time: (6-18D PREG)
Result: Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).

Species: Pig
Dose: 570 MG/KG
Route of Application: Oral
Exposure Time: (1-16W PREG)
Result: Specific Developmental Abnormalities: Craniofacial (including nose and tongue). Specific Developmental Abnormalities: Musculoskeletal system.

CHRONIC EXPOSURE - REPRODUCTIVE HAZARD

Species: Rat
Dose: 63500 UG/KG
Route of Application: Oral
Exposure Time: (10D PREG)
Result: Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).

Species: Rat
Dose: 150 MG/KG
Route of Application: Intraperitoneal
Exposure Time: (11D PREG)
Result: Maternal Effects: Other effects. Nutritional and Gross Metabolic: Weight loss or decreased weight gain. Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).

Species: Mouse
Dose: 3960 UG/KG
Route of Application: Oral
Exposure Time: (1-22D PREG)
Result: Effects on Fertility: Litter size (e.g.; # fetuses per litter; measured before birth). Effects on Newborn: Behavioral. Effects on Newborn: Delayed effects.

Species: Mouse
Dose: 3780 UG/KG
Route of Application: Oral
Exposure Time: (1-21D PREG)
Result: Effects on Newborn: Biochemical and metabolic.

Species: Mouse
Dose: 189 MG/KG
Route of Application: Oral
Exposure Time: (1-21D PREG)
Result: Effects on Newborn: Weaning or lactation index (e.g., # alive at weaning per # alive at day 4).

12 - Ecological Information

No data available.

13 - Disposal Considerations

SUBSTANCE DISPOSAL

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

14 - Transport Information

RID/ADR

UN#: 2810
Class: 6.1
PG: III
Proper Shipping Name: Toxic liquid, organic, n.o.s.

IMDG

UN#: 2810
Class: 6.1
PG: III
Proper Shipping Name: Toxic liquid, organic, n.o.s.
Marine Pollutant: No
Severe Marine Pollutant: Yes
Technical Name: Required

IATA

UN#: 2810
Class: 6.1
PG: III
Proper Shipping Name: Toxic liquid, organic, n.o.s.
Inhalation Packing Group I: No
Technical Name: Required

15 - Regulatory Information

CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES

ANNEX I INDEX NUMBER: 015-040-00-4
INDICATION OF DANGER: Xn N
Harmful. Dangerous for the environment.
R-PHRASES: 22 50/53
Harmful if swallowed. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
S-PHRASES: 24/25 60 61
Avoid contact with skin and eyes. This material and its container must be disposed of as hazardous waste. Avoid release to the environment. Refer to special instructions/safety data sheets.

COUNTRY SPECIFIC INFORMATION

Germany

WGK: 3

SWITZERLAND

SWISS POISON CLASS: 3

16 - Other Information

WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2004 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

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