

Material Safety Data Sheet

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Version 1.5

According to 91/155/EEC

1 - Product and Company Information

Product Name	ATRAZIN PESTANAL (2-CHLOR-4-ETHYL-AMINO- 6-ISOPROPYLAMINO-1,3,5-TRI-AZINE), 250
Product Number	45330
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
ATRAZINE	1912-24-9	217-617-8	613-068-00-7

Formula	C8H14ClN5
Molecular Weight	215.7 AMU
Synonyms	A 361 * Aatram 20G * Aatrex * Aatrex 4L * Aatrex nine-O * Aatrex 80W * 2-Aethylamino-4-chlor-6-isopropylamino-1,3,5-tria zin (German) * 2-Aethylamino-4-isopropylamino-6-chlor-1,3,5-tria zin (German) * Aktikon * Aktikon PK * Aktinit A * Aktinit PK * Aneldazin * Argezin * Atrataf * Atrazin * Atrazine (ACGIH) * Azoprim * Ceasin 50 * Cekuzina-T * 2-Chloro-4-ethylamineisopropylamine-s-triazine * 1-Chloro-3-ethylamino-5-isopropylamino-s-triazine * 1-Chloro-3-ethylamino-5-isopropylamino-2,4,6-tria zine * 2-Chloro-4-ethylamino-6-isopropylamino-s-triazine * 2-Chloro-4-ethylamino-6-isopropylamino-1,3,5-tria zine * 6-Chloro-N-ethyl-N'-(1-methylethyl)-1,3,5-triazin e-2,4-diamine * 2-Chloro-4-(2-propylamino)-6-ethylamino-s-triazin * Chromozin * Cyazin * G 30027 * Geigy 30,027 * Gesaprim * Herbatoxol * Hungazin * Hungazin PK *

3 - Hazards Identification

SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT

May cause sensitization by skin contact. Harmful: danger of serious damage to health by prolonged exposure 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.

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.

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. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

STORAGE

Conditions of Storage: Keep tightly closed.

8 - Exposure Controls / Personal Protection

ENGINEERING CONTROLS

Safety shower and eye bath. Mechanical exhaust required.

GENERAL HYGIENE MEASURES

Wash thoroughly after handling.

EXPOSURE LIMITS

Country	Source	Type	Value
Poland		NDS	5 mg/m3
Poland		NDSCh	-
Poland		NDSP	

EXPOSURE LIMITS - DENMARK

Source	Type	Value
OEL	TWA	2 mg/m3

Remarks: K

EXPOSURE LIMITS - GERMANY

Source	Type	Value
TRGS 900	OEL	2 mg/m3, E

EXPOSURE LIMITS - NORWAY

Source	Type	Value
	OEL	5 mg/m3

Remarks: K

EXPOSURE LIMITS - SWITZERLAND

Source	Type	Value
OEL	OEL	2 mg/m3

Remarks: E

EXPOSURE LIMITS - UNITED KINGDOM

Source	Type	Value
OEL	LTEL	10 mg/m3

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	N/A	
Flammability	N/A	
Autoignition Temp	N/A	
Oxidizing Properties	N/A	
Explosive Properties	N/A	
Explosion Limits	N/A	
Vapor Pressure	N/A	
SG/Density	N/A	
Partition Coefficient	Log Kow: 2.61	
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 acids, Strong bases, 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: XY5600000

ACUTE TOXICITY

LD50
Oral
Rat
672 mg/kg

LC50
Inhalation
Rat
5,200 mg/m3
4H

LD50
Skin
Rat
> 12500 mg/kg

LD50
Intraperitoneal
Rat
235 MG/KG

LD50
Oral
Mouse
850 mg/kg

LD50
Intraperitoneal
Mouse
626 MG/KG

LD50
Oral
Rabbit

750 mg/kg

LD50
Skin
Rabbit
7500 mg/kg

LD50
Oral
Hamster
1000 mg/kg

IRRITATION DATA

Skin
Rabbit
38 mg
Remarks: Open irritation test

Eyes
Rabbit
6.32 mg
Remarks: Severe irritation effect

Skin
Mammal
500 mg
Remarks: Mild irritation effect

Eyes
Mammal
100 mg
Remarks: Severe irritation effect

SENSITIZATION

Skin: May cause allergic skin reaction.

SIGNS AND SYMPTOMS OF EXPOSURE

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

ROUTE OF EXPOSURE

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

CHRONIC EXPOSURE - CARCINOGEN

Result: This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

Rat
Route of Application: Oral
Exposure Time: 2Y
Result: Tumorigenic: Carcinogenic by RTECS criteria.
Blood: Leukemia Tumorigenic Effects: Uterine tumors

Mouse
Route of Application: Oral

Exposure Time: 78W
Result: Tumorigenic:Equivocal tumorigenic agent by RTECS
criteria. Lungs, Thorax, or Respiration:Tumors. Liver:Tumors.

IARC CARCINOGEN LIST

Rating: Group 3

CHRONIC EXPOSURE - MUTAGEN

Result: Laboratory experiments have shown mutagenic effects.

Human
100 MG/L
Cell Type: lymphocyte
DNA damage

Human
3 MMOL/L
Cell Type: fibroblast
Unscheduled DNA synthesis

Human
1 MG/L
Cell Type: lymphocyte
Cytogenetic analysis

Rat
875 MG/KG
Oral
DNA damage

Rat
100 MG/KG
Cell Type: E. coli
Host-mediated assay

Mouse
216 MG/KG
Oral
90D
Other mutation test systems

Mouse
72 MG/KG
Oral
30D
Cytogenetic analysis

Mouse
1500 MG/KG
Oral
Dominant lethal test

Mouse
100 MG/KG
Cell Type: E. coli
Host-mediated assay

Hamster
3 MMOL/L (+S9)
Cell Type: lung
Mutation in microorganisms

CHRONIC EXPOSURE - TERATOGEN

Species: Rat
Dose: 7 GM/KG
Route of Application: Oral
Exposure Time: (6-15D PREG)
Result: Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).

Species: Rat
Dose: 6 GM/KG
Route of Application: Subcutaneous
Exposure Time: (3-9D PREG)
Result: Effects on Embryo or Fetus: Fetal death.

Species: Rabbit
Dose: 975 MG/KG
Route of Application: Oral
Exposure Time: (7-19D PREG)
Result: Specific Developmental Abnormalities: Musculoskeletal system.

CHRONIC EXPOSURE - REPRODUCTIVE HAZARD

Species: Rat
Dose: 700 MG/KG
Route of Application: Oral
Exposure Time: (6-15D PREG)
Result: Maternal Effects: Other effects. Specific Developmental Abnormalities: Musculoskeletal system.

Species: Rat
Dose: 720 MG/KG
Route of Application: Oral
Exposure Time: (10D PRE)
Result: Maternal Effects: Other effects. Effects on Newborn: Behavioral.

Species: Rat
Dose: 2400 MG/KG
Route of Application: Subcutaneous
Exposure Time: (3-9D PREG)
Result: Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).

Species: Mouse
Dose: 418 MG/KG
Route of Application: Subcutaneous
Exposure Time: (6-14D PREG)
Result: Effects on Fertility: Litter size (e.g.; # fetuses per litter; measured before birth). Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Effects on Embryo or Fetus: Fetal death.

Species: Rabbit
Dose: 975 MG/KG
Route of Application: Oral
Exposure Time: (7-19D PREG)
Result: Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants). Effects on Embryo or Fetus: Fetotoxicity (except death, e.g.,

stunted fetus). Effects on Embryo or Fetus: Fetal death.

12 - Ecological Information

N/A

ECOTOXICOLOGICAL EFFECTS

Test Type: EC50 Daphnia

Species: Daphnia magna

Time: 48 h

Value: 6.9 mg/l

Test Type: LC50 Fish

Species: Cyprinodon variegatus (Sheepshead minnow)

Time: 96 h

Value: 2 mg/l

Test Type: LC50 Fish

Species: Lepomis macrochirus (Bluegill)

Time: 96 h

Value: 6.7 mg/l

13 - Disposal Considerations

SUBSTANCE DISPOSAL

Contact a licensed professional waste disposal service to dispose of this material. Observe all federal, state, and local environmental regulations.

14 - Transport Information

RID/ADR

UN#: 2811

Class: 6.1

PG: III

Proper Shipping Name: Toxic solid, organic, n.o.s.

IMDG

UN#: 2811

Class: 6.1

PG: III

Proper Shipping Name: Toxic solid, organic, n.o.s.

Marine Pollutant: No

Severe Marine Pollutant: No

Technical Name: Required

IATA

UN#: 2811

Class: 6.1

PG: III

Proper Shipping Name: Toxic solid, 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: 613-068-00-7

INDICATION OF DANGER: Xn N

Harmful. Dangerous for the environment.

R-PHRASES: 43 48/22 50/53

May cause sensitization by skin contact. Harmful: danger of

serious damage to health by prolonged exposure if swallowed.
Very toxic to aquatic organisms, may cause long-term adverse
effects in the aquatic environment.

S-PHRASES: 36/37 60 61

Wear suitable protective clothing and gloves. 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: 2

SWITZERLAND

SWISS POISON CLASS: 4

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
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