

According to the UN GHS revision 8

Creation Date: May 29, 2024

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1. IDENTIFICATION

1.1 GHS Product identifier

Product name: Amitraz
Catalog Number: T1632
CAS Number: 33089-61-1

1.2 Other means of identification

Other names: -

1.3 Recommended use of the chemical and restrictions on use

Identified uses:

1.4 Supplier's details

Company: Targetmol Chemicals Inc.
Uses advised against: 36 Washington Street, Wellesley Hills, Massachusetts 02481 USA
Tel/Fax: (781) 999-4286

1.5 Emergency phone number

Emergency phone number: 781-999-4286
Service hours: Monday to Friday, 9am-5pm (Standard timezone: UTC/GMT -5hours).

2. HAZARD IDENTIFICATION

2.1 Classification of the substance or mixture

Acute toxicity - Category 4, Oral
Skin sensitization, Category 1
Specific target organ toxicity - repeated exposure, Category 2
Hazardous to the aquatic environment, short-term (Acute) - Category Acute 1
Hazardous to the aquatic environment, long-term (Chronic) - Category Chronic 1

2.2 GHS label elements, including precautionary statements

Pictogram(s):



Signal word:

Warning

Hazard statement(s):

H302 Harmful if swallowed
H317 May cause an allergic skin reaction
H373 May cause damage to organs through prolonged or repeated exposure
H410 Very toxic to aquatic life with long lasting effects

Precautionary statement(s):

Prevention:

P264 Wash ... thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...
P260 Do not breathe dust/fume/gas/mist/vapours/spray.

Response:

P273 Avoid release to the environment.
P301+P317 IF SWALLOWED: Get medical help.
P330 Rinse mouth.
P302+P352 IF ON SKIN: Wash with plenty of water/...
P333+P317 If skin irritation or rash occurs: Get medical help.
P321 Specific treatment (see ... on this label).
P362+P364 Take off contaminated clothing and wash it before reuse.
P319 Get medical help if you feel unwell.
P391 Collect spillage.

Storage:

none

Disposal:

P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

2.3 Other hazards which do not result in classification

no data available

3. COMPOSITION/INFORMATION ON INGREDIENTS**3.1 Substances**

Chemical name	Common names and synonyms	CAS number	EC number
Amitraz	-	33089-61-1	251-375-4

4. FIRST-AID MEASURES**4.1 Description of necessary first-aid measures****General advice**

no data available

If inhaled

Fresh air, rest. Seek medical attention if you feel unwell.

Following skin contact

Remove contaminated clothes. Rinse and then wash skin with water and soap. Refer for medical attention .

Following eye contact

Rinse with plenty of water (remove contact lenses if easily possible). Refer for medical attention.

Following ingestion

Rinse mouth. Give a slurry of activated charcoal in water to drink. Refer for medical attention . See Notes.

4.2 Most important symptoms/effects, acute and delayed

Airway protection. Ensure that a clear airway exists. Intubate the patient and aspirate the secretions with a large-bore suction device if necessary. Administer oxygen by mechanically assisted pulmonary ventilation if respiration is depressed. Improve tissue oxygenation as much as possible before administering atropine, to minimize the risk of ventricular fibrillation. In severe poisonings, it may be necessary to support pulmonary ventilation mechanically for several days. N-methyl carbamate insecticides

4.3 Indication of immediate medical attention and special treatment needed, if necessary

no data available

5. FIRE-FIGHTING MEASURES**5.1 Extinguishing media**

Fire Extinguishing Media: Water, foam, dry powder, CO2.

5.2 Specific hazards arising from the chemical

Combustible. Liquid formulations containing organic solvents may be flammable. Gives off irritating or toxic fumes (or gases) in a fire. Risk of fire and explosion if formulations contain flammable/explosive solvents.

5.3 Special protective actions for fire-fighters

Use water spray, foam, powder, carbon dioxide.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Do NOT let this chemical enter the environment. Sweep spilled substance into covered containers. If appropriate, moisten first to prevent dusting. Carefully collect remainder. Then store and dispose of according to local regulations.

6.2 Environmental precautions

Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Do NOT let this chemical enter the environment. Sweep spilled substance into covered containers. If appropriate, moisten first to prevent dusting. Carefully collect remainder. Then store and dispose of according to local regulations.

6.3 Methods and materials for containment and cleaning up

If a spill occurs, clean it up promptly. Don't wash it away. Instead, sprinkle the spill with sawdust, vermiculite, or kitty litter. Sweep it into a plastic garbage bag, and dispose of it as directed on the pesticide product label./Residential users/

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

NO open flames. Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

7.2 Conditions for safe storage, including any incompatibilities

Provision to contain effluent from fire extinguishing. Store in an area without drain or sewer access. Store in original container in locked storage area. Prevent Tick Collar for Dogs

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure limit values

no data available

Biological limit values

no data available

8.2 Appropriate engineering controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

Wear safety spectacles or face shield.

Skin protection

Protective gloves. Protective clothing.

Respiratory protection

Use ventilation (not if powder).

Thermal hazards

no data available

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state

Amitraz is a white monoclinic crystals. Melting point 187-189°F (86-87°C). Insoluble in water. Used as an acaricide, insecticide and treatment of demodectic mange in dogs.

Color

White/pale yellow crystalline solid

Odour

Slight amine odor

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Melting point/ freezing point	86-87°C
Boilingpoint or initial boiling point and boiling range	450.7°C at 760mmHg
Flammability	Combustible. Liquid formulations containing organic solvents may be flammable. Gives off irritating or toxic fumes (or gases) in a fire.
Lower and upper explosion limit/flammability limit	no data available
Flash point	no data available
Auto-ignition temperature	no data available
Decomposition temperature	no data available
pH	no data available
Kinematic viscosity	no data available
Solubility	DMSO: 50 mg/mL (170.41 mM),
N-octanol-water partition coefficient	log Kow = 5.50
Vapour pressure	2.0X10 ⁻⁶ mm Hg at 25 deg C
Density and/ or relative density	0.98g/cm ³
Relative vapour density	no data available
Particle characteristics	no data available

10. STABILITY AND REACTIVITY

10.1 Reactivity

Decomposes on burning. This produces toxic fumes including nitrogen oxides.

10.2 Chemical stability

Amitraz is unstable under acidic conditions.

10.3 Possibility of hazardous reactions

Unstable in acid.

10.4 Conditions to avoid

no data available

10.5 Incompatible materials

Amitraz is unstable under acidic conditions.

10.6 Hazardous decomposition products

When heated to decomposition it emits toxic fumes of /nitrogen oxides/.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral: LD50 Rat oral 600 mg/kg bw

Inhalation: no data available

Dermal: no data available

Skin corrosion/irritation

no data available

Serious eye damage/irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

Cancer Classification: Group C Possible Human Carcinogen

Reproductive toxicity

no data available

STOT-single exposure

The substance may cause effects on the central nervous system and cardiovascular system.

STOT-repeated exposure

no data available

Aspiration hazard

No indication can be given about the rate at which a harmful concentration of this substance in the air is reached.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish: no data available

Toxicity to daphnia and other aquatic invertebrates: EC50; Species: Daphnia magna (Water Flea) 1 instar larva; Conditions: freshwater, static; Concentration: 35 ug/L for 48 hr (28-44 ug/L); Effect: intoxication, immobilization. /Technical grade

Toxicity to algae: no data available

Toxicity to microorganisms: no data available

12.2 Persistence and degradability

AEROBIC: Amitraz degrades in aerobic soil with a half-life of less than one day. N-(2,4-dimethylphenyl)-N'-methylmethanimidamide (BTS27271)(2) and 2,4-dimethylphenylformamide (NTS27919)(2), formed via hydrolysis at the C-N [N-methylmethanimidamide] bond, are the primary metabolites of amitraz.(1).

12.3 Bioaccumulative potential

Measured BCF values of 588-1,838 in bluegill sunfish have been reported for amitraz(1). According to a classification scheme(2), these BCF values suggest bioconcentration in aquatic organisms is high to very high(SRC), provided the compound is not metabolized by the organism(SRC).

12.4 Mobility in soil

The Koc of amitraz was reported to range from 1,000(1) to 2000(2). According to a classification scheme(3), this Koc value indicates amitraz will have low mobility in soil. Although it is considered to be moderately mobile in some soils (batch equilibrium studies indicated moderate mobility in sandy loam, silt loam and clay soils and very mobile in clay soils), amitraz degrades rapidly and therefore is not considered to be a serious concern for groundwater contamination(4). Amitraz had measured Freundlich adsorption coefficients of 1.69 in a Shelby sandy soil, 3.01 in a Spencer sand, 89.13 in a Terling clay and 16.31 in a Shelford clay(4). The pKa of amitraz is 4.20(2), indicating that this compound will partially exist in the cation form in the environment and cations generally adsorb more strongly to soils containing organic carbon and clay than their neutral counterparts(5).

12.5 Other adverse effects

no data available

13. DISPOSAL CONSIDERATIONS

13.1 Disposal methods

Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

Contaminated packaging

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Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

14. TRANSPORT INFORMATION

14.1 UN Number

no data available

14.2 UN Proper Shipping Name

no data available

14.3 Transport hazard class(es)

no data available

14.4 Packing group, if applicable

no data available

14.5 Environmental hazards

no data available

14.6 Special precautions for user

no data available

14.7 Transport in bulk according to IMO instruments

no data available

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations specific for the product in question

European Inventory of Existing Commercial Chemical Substances (EINECS)	Listed.
EC Inventory	Listed.
United States Toxic Substances Control Act (TSCA) Inventory	Not Listed.
China Catalog of Hazardous chemicals 2015	Not Listed.
New Zealand Inventory of Chemicals (NZIoC)	Listed.
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	Not Listed.
Vietnam National Chemical Inventory	Listed.
Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)	Listed.
Korea Existing Chemicals List (KECL)	Listed.

16. OTHER INFORMATION

Information on revision

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Abbreviations and acronyms

- CAS: Chemical Abstracts Service
- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- RID: Regulation concerning the International Carriage of Dangerous Goods by Rail
- IMDG: International Maritime Dangerous Goods
- IATA: International Air Transportation Association
- TWA: Time Weighted Average
- STEL: Short term exposure limit
- LC50: Lethal Concentration 50%
- LD50: Lethal Dose 50%
- EC50: Effective Concentration 50%

References

IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>

HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>

IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>

eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en

CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>

ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>

ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: <http://www.phmsa.dot.gov/hazmat/library/erg>

Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>

ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

Other Information

If the pesticide is present under the form of a formulation containing hydrocarbon solvents, vomiting may not be induced. Carrier solvents used in commercial formulations may change physical and toxicological properties. If the substance is formulated with solvents also consult the ICSCs of these materials.

Disclaimer: 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. We as supplier shall not be held liable for any damage resulting from handling or from contact with the above product.

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