

# SAFETY DATA SHEETS

According to the UN GHS revision 9

Version: 1.0  
Creation Date: July 15, 2019  
Revision Date: July 15, 2019

## SECTION 1: Identification

### 1.1 GHS Product identifier

**Product name** Ametryn

### 1.2 Other means of identification

**Product number** -  
**Other names** Crisatrine; N2-ethyl-6-(methylsulfanyl)-N4-(propan-2-yl)-1,3,5-triazine-2,4-diamine; 2-ethylamino-4-isopropylamino-6-methylmercapto-s-triazine

### 1.3 Recommended use of the chemical and restrictions on use

**Identified uses** Industrial and scientific research use.  
**Uses advised against** no data available

### 1.4 Supplier's details

**Company** Shanghai Yansheng Internet Technology Co., Ltd  
**Address** 513, A3 / F, green space future center, Fengxian District, Shanghai, 201400, China  
**Telephone** +86-4000-6969-66

### 1.5 Emergency phone number

**Emergency phone number** +86-4000-6969-66  
**Service hours** Monday to Friday, 9am-5pm (Standard time zone: UTC/GMT +8 hours).

## SECTION 2: Hazard identification

### 2.1 Classification of the substance or mixture

Acute toxicity - Category 4, Oral  
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  
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.

<b>Response</b>	P273 Avoid release to the environment. P301+P317 IF SWALLOWED: Get medical help. P330 Rinse mouth. P391 Collect spillage.
<b>Storage</b>	none
<b>Disposal</b>	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

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## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Chemical name	Common names and synonyms	CAS number	EC number	Concentration
Ametryn	Ametryn	834-12-8	212-634-7	100%

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## SECTION 4: First-aid measures

### 4.1 Description of necessary first-aid measures

#### If inhaled

Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a doctor immediately. Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

#### Following skin contact

Take off contaminated clothing immediately. Wash off with soap and plenty of water. Consult a doctor.

#### Following eye contact

Rinse with pure water for at least 15 minutes. Consult a doctor.

#### Following ingestion

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

### 4.2 Most important symptoms/effects, acute and delayed

Excerpt from ERG Guide 151 [Substances - Toxic (Non-combustible)]: Highly toxic, may be fatal if inhaled, swallowed or absorbed through skin. Avoid any skin contact. Effects of contact or inhalation may be delayed. Fire may produce irritating, corrosive and/or toxic gases. Runoff from fire control or dilution water may be corrosive and/or toxic and cause pollution. (ERG, 2016)

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

Skin decontamination. Skin contamination should be treated promptly by washing with soap and water. Contamination of the eyes should be treated immediately by prolonged flushing of the eyes with large amounts of clean water. If dermal or ocular irritation persists, medical attention should be obtained without delay. Other herbicides

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## SECTION 5: Fire-fighting measures

### 5.1 Suitable extinguishing media

If material on fire or involved in fire: Do not extinguish fire unless flow can be stopped or safely confined. Use water in flooding quantities as fog. Solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water. Apply water from as far a distance as possible. Use "alcohol" foam, carbon dioxide or dry chemical. Triazine pesticides, liquid, NOS

## **5.2 Specific hazards arising from the chemical**

Excerpt from ERG Guide 151 [Substances - Toxic (Non-combustible)]: Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes. Containers may explode when heated. Runoff may pollute waterways. (ERG, 2016)

## **5.3 Special protective actions for fire-fighters**

Wear self-contained breathing apparatus for firefighting if necessary.

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## **SECTION 6: Accidental release measures**

### **6.1 Personal precautions, protective equipment and emergency procedures**

Avoid dust formation. Avoid breathing mist, gas or vapours. Avoid contacting with skin and eye. Use personal protective equipment. Wear chemical impermeable gloves. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

### **6.2 Environmental precautions**

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

### **6.3 Methods and materials for containment and cleaning up**

For minor spills, follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. ... Ametryn Technical

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## **SECTION 7: Handling and storage**

### **7.1 Precautions for safe handling**

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**

Store in cool, dry place.

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## **SECTION 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 tightly fitting safety goggles with side-shields conforming to EN 166(EU) or NIOSH (US).

#### **Skin protection**

Wear fire/flame resistant and impervious clothing. Handle with gloves. Gloves must be inspected prior to use. Wash and dry hands. The selected protective gloves have to satisfy

the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

#### **Respiratory protection**

If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

#### **Thermal hazards**

no data available

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## **SECTION 9: Physical and chemical properties and safety characteristics**

<b>Physical state</b>	Solid. Powder.
<b>Colour</b>	White.
<b>Odour</b>	no data available
<b>Melting point/freezing point</b>	83 - 87 °C. Atm. press.:1 atm.
<b>Boiling point or initial boiling point and boiling range</b>	346 °C. Atm. press.:101.325 kPa.
<b>Flammability</b>	no data available
<b>Lower and upper explosion limit/flammability limit</b>	no data available
<b>Flash point</b>	193.5°C
<b>Auto-ignition temperature</b>	> 450 °C. Remarks:At atm. press. of 1.0 atm.
<b>Decomposition temperature</b>	no data available
<b>pH</b>	no data available
<b>Kinematic viscosity</b>	no data available
<b>Solubility</b>	Readily soluble in organic solvents
<b>Partition coefficient n-octanol/water</b>	log Pow = 3. Temperature:20 °C.
<b>Vapour pressure</b>	0 Pa. Temperature:20 °C.
<b>Density and/or relative density</b>	1 180 kg/m <sup>3</sup> . Temperature:22 °C.
<b>Relative vapour density</b>	no data available
<b>Particle characteristics</b>	no data available

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## **SECTION 10: Stability and reactivity**

### **10.1 Reactivity**

No rapid reaction with air. No rapid reaction with water.

### **10.2 Chemical stability**

Very stable over several yr of shelf life & only slight sensitivity to natural light & extreme temperatures.

### **10.3 Possibility of hazardous reactions**

Nonflammable. An amine, organosulfide. Organosulfides are incompatible with acids, diazo and azo compounds, halocarbons, isocyanates, aldehydes, alkali metals, nitrides, hydrides, and other strong reducing agents. Reactions with these materials generate heat and in many cases hydrogen gas. Many of these compounds may liberate hydrogen sulfide upon decomposition or reaction with an acid. Amines are chemical bases. They neutralize acids to form salts plus water. These acid-base reactions are exothermic. The amount of heat that is evolved per mole of amine in a neutralization is largely independent of the strength of the amine as a base. Amines may be incompatible with isocyanates, halogenated organics, peroxides, phenols (acidic), epoxides, anhydrides, and acid halides. Flammable gaseous hydrogen is generated by amines in combination with strong reducing agents, such as hydrides.

## 10.4 Conditions to avoid

no data available

## 10.5 Incompatible materials

no data available

## 10.6 Hazardous decomposition products

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

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# SECTION 11: Toxicological information

### Acute toxicity

- Oral: LD50 Rat oral 1100 mg/kg Technical
- Inhalation: LC50 Rat (albino) inhalation >27 mg/L/4 hr
- Dermal: LD50 Rat percutaneous > 3100 mg/kg

### 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: Data are Inadequate for an Assessment of Human Carcinogenic Potential

### Reproductive toxicity

no data available

### STOT-single exposure

no data available

### STOT-repeated exposure

no data available

### Aspiration hazard

no data available

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# SECTION 12: Ecological information

## 12.1 Toxicity

- Toxicity to fish: LC50 - Oncorhynchus mykiss (previous name: Salmo gairdneri) - 5.9 mg/L - 96 h.
- Toxicity to daphnia and other aquatic invertebrates: EC50 - Daphnia magna - > 15 mg/L - 48 h.
- Toxicity to algae: EC50 - Desmodesmus subspicatus (previous name: Scenedesmus subspicatus) - 0.003 mg/L - 72 h.
- Toxicity to microorganisms: EC50 - activated sludge of a predominantly domestic sewage - > 1 000 mg/L - 3 h.

## 12.2 Persistence and degradability

**AEROBIC:** Several soil bacteria and fungi are reported to attack ametryne(1). The methylthio group is known to undergo sulfoxidation by microsomal enzymes in plant and animal systems and the same reactions usually hold true for soil microorganisms(1). Methylthio-s-triazine herbicides are generally more resistant to biodegradation than the corresponding chloro-s-triazines(1). No biodegradation was observed when 200 ppm of ametryne was incubated for a month using a soil suspension inoculum at 30 deg C(2). When the concn equivalent of 3 kg/ha of ametryne was incubated in a clay-lime soil, 2.8% and 8.6% of the herbicide degraded to CO<sub>2</sub> in 51 and 110 days, respectively(2). In another experiment, 10-50% degradation in 10 days occurred in one of four soils, while degradation was either absent or uncertain in the other three soils(3). In a 25-day experiment, CO<sub>2</sub> evolution occurred from ametryne-treated sterile soil that had been inoculated with an extract from ametryne enriched soil, but not from uninoculated controls(1). After 60 days incubation, 8.7% and 63.7% of the applied ametryne remained in inoculated Hilo silty clay loam and Molakai silty clay, two Hawaiian soils that are typically used in the cultivation of sugarcane(4). The inoculum was prepared by leaching Molakai soil with ametryne solutions(4). Biodegradation initially involved N-dealkylation. Less than 0.2% of the ametryne degraded to CO<sub>2</sub> in this period(4). No significant degradation occurred in autoclaved controls(4). Ametryne has been shown to be susceptible to degradation by *Nocardia* sp.(5).

### 12.3 Bioaccumulative potential

An estimated BCF of 19 was calculated in fish for ametryne(SRC), using a log K<sub>ow</sub> of 2.98(1) and a regression-derived equation(2). According to a classification scheme(3), this BCF suggests the potential for bioconcentration in aquatic organisms is low(SRC).

### 12.4 Mobility in soil

The average K<sub>oc</sub> reported for ametryne in 32 soils was 388.4(1). Ametryne has a K<sub>oc</sub> value of 300(2). Mean overall K<sub>oc</sub> values measured in four Hawaiian soils were 257 for surface soil (0 to 20 cm) and 170 for subsoil (60 to 80 cm); K<sub>oc</sub>s of 530, 170, 156, and 171 were measured in the surface soil of Torrox (mean % OC 1.30, pH 6.7), Eustrustox (mean OC 1.63%, pH 6.4), Tropohumult (mean OC% 2.88, pH 5.3), and Hydrandept (mean OC% 6.22, pH 5.3); K<sub>oc</sub>s of 235, 254, 87, and 107 were measured in subsoil of Torrox (mean OC% 0.55, pH 6.8), Eustrustox (mean OC% 0.76, pH 5.7), Tropohumult (mean OC% 1.51, pH 5.3), and Hydrandept (mean OC% 3.19, pH 5.6)(3). K<sub>oc</sub> values were measured for two Kishon River sediments; Kfar Yehushua was 69.33 (7.1 pH, 30% sand, 30% silt 40% clay 1.63% TOC) and Haifa industrial area was 170.40 (6.8 pH, 30 % sand, 20% silt, 50% clay, 1.25% TOC)(4). K<sub>oc</sub> values ranged from 102-123 in fresh soils amended with activated sludge, anaerobic digested sludge and compost, and 69-129 in incubated soils with the same amendments(5). According to a classification scheme(6), these K<sub>oc</sub> values suggest that ametryne is expected to have moderate to high mobility in soil(SRC). Of 38 values cited in literature the mean K<sub>d</sub> is 5.69(7).

### 12.5 Other adverse effects

no data available

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## SECTION 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

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.

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## SECTION 14: Transport information

### 14.1 UN Number

ADR/RID: Not dangerous      IMDG: Not dangerous goods. IATA: Not dangerous goods.

goods. (For reference only, please check.) (For reference only, please check.) (For reference only, please check.)

## 14.2 UN Proper Shipping Name

ADR/RID: Not dangerous goods. (For reference only, please check.) IMDG: Not dangerous goods. (For reference only, please check.) IATA: Not dangerous goods. (For reference only, please check.)

## 14.3 Transport hazard class(es)

ADR/RID: Not dangerous goods. (For reference only, please check.) IMDG: Not dangerous goods. (For reference only, please check.) IATA: Not dangerous goods. (For reference only, please check.)

## 14.4 Packing group, if applicable

ADR/RID: Not dangerous goods. (For reference only, please check.) IMDG: Not dangerous goods. (For reference only, please check.) IATA: Not dangerous goods. (For reference only, please check.)

## 14.5 Environmental hazards

ADR/RID: Yes IMDG: Yes IATA: Yes

## 14.6 Special precautions for user

no data available

## 14.7 Transport in bulk according to IMO instruments

no data available

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# SECTION 15: Regulatory information

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

Chemical name	Common names and synonyms	CAS number	EC number
Ametryn	Ametryn	834-12-8	212-634-7
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)			Listed.
Vietnam National Chemical Inventory			Listed.
Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)			Not Listed.
Korea Existing Chemicals List (KECL)			Not Listed.

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# SECTION 16: Other information

### Information on revision

Creation Date July 15, 2019  
Revision Date July 15, 2019

### 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](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/>

**Any questions regarding this SDS, Please send your inquiry to [sds@xixisys.com](mailto:sds@xixisys.com)**

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