

According to the UN GHS revision 8

Creation Date: August 12, 2024

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## 1. IDENTIFICATION

### 1.1 GHS Product identifier

Product name: Capsaicin

Catalog Number: T1062

CAS Number: 404-86-4

### 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 irritation, Category 2

Serious eye damage, Category 1

### 2.2 GHS label elements, including precautionary statements

Pictogram(s):



Signal word: Danger

Hazard statement(s):

H302 Harmful if swallowed  
H315 Causes skin irritation  
H318 Causes serious eye damage

Precautionary statement(s):

Prevention:

P264 Wash ... thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...

Response:

P301+P317 IF SWALLOWED: Get medical help.  
P330 Rinse mouth.  
P302+P352 IF ON SKIN: Wash with plenty of water/...  
P321 Specific treatment (see ... on this label).  
P332+P317 If skin irritation occurs: Get medical help.  
P362+P364 Take off contaminated clothing and wash it before reuse.

P305+P354+P338 IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P317 Get medical help.

**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 |
|---------------|---------------------------|------------|-----------|
| Capsaicin     | -                         | 404-86-4   | 206-969-8 |

## 4. FIRST-AID MEASURES

### 4.1 Description of necessary first-aid measures

#### General advice

no data available

#### 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

Most ingestions cause no symptoms or only mild gastroenteritis. Patients recover quickly with supportive care. Emergency and supportive measures: Maintain an open airway and assist ventilation if necessary. Administer supplemental oxygen. Treat coma, seizures, arrhythmias, and hypotension if they occur. Replace fluid losses caused by gastroenteritis with IV crystalloid solutions. ...

Decontamination: Wash the affected areas with soap and water and give sips of water to drink. Administer ice cream, juice bars, pudding, or cold milk to soothe irritated oral mucous membranes after exposure to insoluble oxalate plants. Do not induce vomiting because of potential aggravation or irritant effects. Activated charcoal is not necessary. Plants

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

no data available

## 5. FIRE-FIGHTING MEASURES

### 5.1 Extinguishing media

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.

### 5.2 Specific hazards arising from the chemical

no data available

### 5.3 Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

### 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

ACCIDENTAL RELEASE MEASURES: Personal precautions, protective equipment, and emergency procedures: Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Methods and materials for containment and cleaning up: Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

### 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

Keep container tightly closed in a dry and well-ventilated place. Recommended storage temperature: 2 - 8 deg C.

### 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

### 9. PHYSICAL AND CHEMICAL PROPERTIES

|                               |                                     |
|-------------------------------|-------------------------------------|
| Physical state                | Solid                               |
| Color                         | Pure dark red solid                 |
| Odour                         | Highly volatile with a pungent odor |
| Melting point/ freezing point | -39°C(lit.)                         |

|  |   |
|--|---|
| <b>Boilingpoint or initial boiling point and boiling range</b> | 157°C(lit.)                                   |
| <b>Flammability</b>  | no data available                             |
| <b>Lower and upper explosion limit/flammability limit</b>      | no data available                             |
| <b>Flash point</b>   | 53°C(lit.)                                    |
| <b>Auto-ignition temperature</b>                               | no data available                             |
| <b>Decomposition temperature</b>                               | no data available                             |
| <b>pH</b>  | no data available                             |
| <b>Kinematic viscosity</b>                                     | no data available                             |
| <b>Solubility</b>  | DMSO: 50 mg/mL (163.71 mM),                   |
| <b>N-octanol-water partition coefficient</b>                   | log Kow = 3.04                                |
| <b>Vapour pressure</b>   | 1.32X10 <sup>-8</sup> mm Hg at 25 deg C (est) |
| <b>Density and/ or relative density</b>                        | 1.041g/cm <sup>3</sup>                        |
| <b>Relative vapour density</b>                                 | no data available                             |
| <b>Particle characteristics</b>                                | no data available                             |

### 10. STABILITY AND REACTIVITY

#### 10.1 Reactivity

no data available

#### 10.2 Chemical stability

Stable under recommended storage conditions.

#### 10.3 Possibility of hazardous reactions

no data available

#### 10.4 Conditions to avoid

no data available

#### 10.5 Incompatible materials

Incompatible materials: Strong oxidizing agents.

#### 10.6 Hazardous decomposition products

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

### 11. TOXICOLOGICAL INFORMATION

#### Acute toxicity

Oral: LD50 Mouse oral >2500 mg/kg

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

no data available

### Reproductive toxicity

no data available

### STOT-single exposure

no data available

### STOT-repeated exposure

no data available

### Aspiration hazard

no data available

## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

Toxicity to fish: no data available

Toxicity to daphnia and other aquatic invertebrates: no data available

Toxicity to algae: no data available

Toxicity to microorganisms: no data available

### 12.2 Persistence and degradability

no data available

### 12.3 Bioaccumulative potential

An estimated BCF of 47 was calculated in fish for capsaicin(SRC), using a log Kow of 3.04(1) and a regression-derived equation(2). According to a classification scheme(3), this BCF suggests the potential for bioconcentration in aquatic organisms is moderate(SRC).

### 12.4 Mobility in soil

Using a structure estimation method based on molecular connectivity indices(1), the Koc of capsaicin can be estimated to be  $1.2 \times 10^4$  (SRC). According to a classification scheme(2), this estimated Koc value suggests that capsaicin is expected to be immobile in soil.

### 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

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              | 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) | Not Listed. |
| Korea Existing Chemicals List (KECL)                                     | Not 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.com>

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

no data available

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