

According to the UN GHS revision 8

## 1. IDENTIFICATION

### 1.1 GHS Product identifier

Product name: Benzamide

Catalog Number: T6780

CAS Number: 55-21-0

### 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: 34 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

Germ cell mutagenicity, Category 2

### 2.2 GHS label elements, including precautionary statements

Pictogram(s):



Signal word: Warning

Hazard statement(s):  
H302 Harmful if swallowed  
H341 Suspected of causing genetic defects

Precautionary statement(s):

Prevention:

P264 Wash ... thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P203 Obtain, read and follow all safety instructions before use.  
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...

Response:

P301+P317 IF SWALLOWED: Get medical help.  
P330 Rinse mouth.  
P318 IF exposed or concerned, get medical advice.

Storage:

P405 Store locked up.

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
Benzamide	-	55-21-0	200-227-7

## 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

Basic treatment: Establish a patent airway. Suction if necessary. Watch for signs of respiratory insufficiency and assist respirations if needed. Administer oxygen by nonrebreather mask at 10 to 15 L/min. Monitor for pulmonary edema and treat if necessary. Monitor for shock and treat if necessary. For eye contamination, flush eyes immediately with water. Irrigate each eye continuously with normal saline during transport. Do not use emetics. Activated charcoal is not effective. For ingestion, rinse mouth and administer 5 ml/kg up to 200 ml of water for dilution if the patient can swallow, has a strong gag reflex, and does not drool. Activated charcoal is not effective. Do not attempt to neutralize because of exothermic reaction. Cover skin burns with dry, sterile dressings after decontamination. Organic acids and related compounds

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

SYMPTOMS: This compound may produce gastric pain, nausea, and vomiting. ACUTE/CHRONIC HAZARDS: When heated to decomposition this compound emits toxic fumes. (NTP, 1992)

## 5. FIRE-FIGHTING MEASURES

### 5.1 Extinguishing media

Fires involving this compound can be extinguished using a dry chemical, carbon dioxide or Halon extinguisher. (NTP, 1992)

### 5.2 Specific hazards arising from the chemical

Flash point data for this chemical are not available, however it is probably combustible. (NTP, 1992)

### 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

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

## 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 the container tightly closed in a dry, cool and well-ventilated place. Store apart from foodstuff containers or incompatible materials.

## 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

<b>Physical state</b>	PHYSICAL DESCRIPTION: White powder. (NTP, 1992)
<b>Color</b>	Colorless crystals
<b>Odour</b>	no data available
<b>Melting point/ freezing point</b>	232°C(dec.)(lit.)
<b>Boilingpoint or initial boiling point and boiling range</b>	53°C/3mmHg(lit.)
<b>Flammability</b>	no data available
<b>Lower and upper explosion limit/flammability limit</b>	no data available

<b>Flash point</b>	180°C
<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: 45 mg/mL (371.47 mM),Sonication is recommended. Ethanol: 23 mg/mL (189.86 mM),Sonication is recommended. H2O: < 1 mg/mL (insoluble or slightly soluble),
<b>N-octanol-water partition coefficient</b>	log Kow= 0.64
<b>Vapour pressure</b>	no data available
<b>Density and/ or relative density</b>	1.341 g/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

no data available

#### 10.3 Possibility of hazardous reactions

Combustible BENZAMIDE reacts with azo and diazo compounds to generate toxic gases. Forms flammable gases with strong reducing agents. Mixing with dehydrating agents such as P<sub>2</sub>O<sub>5</sub> or SOCl<sub>2</sub> generates the corresponding nitrile. Combustion generates toxic mixed oxides of nitrogen (NO<sub>x</sub>).

#### 10.4 Conditions to avoid

no data available

#### 10.5 Incompatible materials

no data available

#### 10.6 Hazardous decomposition products

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

### 11. TOXICOLOGICAL INFORMATION

#### Acute toxicity

Oral: LD<sub>50</sub> Mouse oral 1160 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: LC50 Pimephales promelas (fathead minnow) 661 mg/l/96 hr (confidence limit 590 - 740 mg/l), flow-through bioassay with measured concentrations, 25.1 deg C, dissolved oxygen 7.2 mg/l, hardness 47.0 mg/l calcium carbonate, alkalinity 41.3 mg/l calcium carbonate, and pH 7.5.

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**

AEROBIC: Benzamide is readily oxidized by activated sludge from a municipal waste water plant(1). However, no information is available concerning biodegradation in aerobic natural waters(SRC). Benzamide is oxidized by soil bacteria adapted to phenol(2-4). In experiments in which 400 mg/l of benzamide was applied to soil columns, 96% degradation occurred within 3 days in a clay soil and 98% degradation occurred within 13 days in an organic soil(5).

### **12.3 Bioaccumulative potential**

An estimated BCF of 3 was calculated for benzamide(SRC), using a log Kow of 0.64(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 Koc of benzamide ranges from 9 to 57(1-4). According to a classification scheme(5), these Koc values suggest that benzamide is expected to have high to very high mobility in soil(SRC). Batch equilibrium studies were conducted on benzamide in two representative soils and a sediment(1). The Koc in an acidic forest soil (4.85% organic carbon, pH 2.8), an agricultural soil (1.25% organic carbon, pH 6.7), and a sediment (1.58% organic carbon, pH 7.1) was 57, 20 and 9, respectively. Koc values for sewage sludges and soils were 40 and 18, respectively(3).

### **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**

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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)	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

**Creation Date** December 01, 2025

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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>

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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/>

### Other Information

no data available

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