ChemicalBook

Chemical Safety Data Sheet MSDS / SDS

Bentazone

Revision Date:2026-03-20 Revision Number:1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product identifier

Product name	: Bentazone
CBnumber	: CB7235319
CAS	: 25057-89-0
EINECS Number	: 246-585-8
Synonyms	: Bendioxide;BENTAZONE

Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses	: For R&D use only. Not for medicinal, household or other use.
Uses advised against	: none

Company Identification

Company	: Chemicalbook
Address	: Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing
Telephone	: 010-86108875

SECTION 2: Hazards identification

GHS Label elements, including precautionary statements

Symbol(GHS)

Signal word Warning

Precautionary statements

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continuerinsing.

P302+P352 IF ON SKIN: wash with plenty of soap and water.

P301+P312 IF SWALLOWED: call a POISON CENTER or doctor/physician IF you feel unwell.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P273 Avoid release to the environment.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

Hazard statements

H412 Harmful to aquatic life with long lasting effects

H319 Causes serious eye irritation

H317 May cause an allergic skin reaction

H302 Harmful if swallowed

SECTION 3: Composition/information on ingredients

Substance

Product name	: Bentazone
Synonyms	: Bendioxide;BENTAZONE
CAS	: 25057-89-0
EC number	: 246-585-8
MF	: C10H12N2O3S
MW	: 240.28

SECTION 4: First aid measures

4.1 Description of necessary first-aid measures

General advice

no data available

If inhaled

Fresh air, rest. Refer for medical attention.

Following skin contact

Remove contaminated clothes. Rinse and then wash skin with water and soap.

Following eye contact

First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

Following ingestion

Give one or two glasses of water to drink. Refer for medical attention .

4.2 Most important symptoms/effects, acute and delayed

Skin decontamination: Skin contamination should he 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.

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

no data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Use water spray, powder, foam, carbon dioxide.

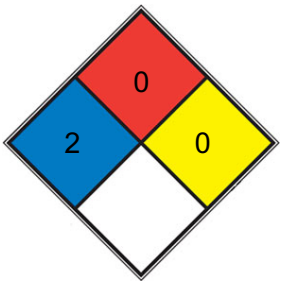
5.2 Specific hazards arising from the chemical

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, powder, foam, carbon dioxide.

NFPA 704



■	HEALTH	2	Intense or continued but not chronic exposure could cause temporary incapacitation or possible residual injury (e.g. diethyl ether, ammonium phosphate, iodine)
■	FIRE	0	Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand. Materials that will not burn in air when exposed to a temperature of 820 °C (1,500 °F) for a period of 5 minutes.(e.g. Carbon tetrachloride)
■	REACT	0	Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium,N2)
□	SPEC. HAZ.		

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Do NOT wash away into sewer. 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. Personal protection: chemical protection suit including self-contained breathing apparatus.

6.2 Environmental precautions

Do NOT wash away into sewer. 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. Personal protection: chemical protection suit including self-contained breathing apparatus.

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.

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

Provision to contain effluent from fire extinguishing. Separated from food and feedstuffs.Avoid freezing.

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 riskelimination area.

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

Eye/face protection

Wear safety goggles.

Skin protection

Protective gloves.

Respiratory protection

Avoid inhalation of dust and mist. Use local exhaust or breathing protection.

Thermal hazards

no data available

SECTION 9: Physical and chemical properties

Information on basic physicochemical properties

COLOURLESS-TO-WHITE CRYSTALLINE POWDER.

Color

Colorless crystals

Odour

ODORLESS

Melting point/ freezing point

137-139°C

Boilingpoint or initial boiling point and boiling range

395.7°C at 760 mmHg

Flammability

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

193.1°C

Auto-ignition temperature

no data available

Decomposition temperature

200°C

pH

no data available

Kinematic viscosity

no data available

Solubility

DMSO: Soluble,

N-octanol-water partition coefficient

log Kow = 2.80

Vapour pressure

1.8E-06mmHg at 25°C

Density and/ or relative density

1.345 g/cm3

Relative vapour density

no data available

Particle characteristics

no data available

Water solubility

0.5g/L(20 ºC)

SECTION 10: Stability and reactivity

10.1 Reactivity

Decomposes on heating and on burning. This produces toxic fumes including sulfur oxides and nitrogen oxides.

10.2 Chemical stability

Not decomposed by sunlight

10.3 Possibility of hazardous reactions

Decomposes on heating and on burning. This produces toxic fumes including sulfur oxides and nitrogen oxides.

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 /sulfur oxides and nitrogen oxides/.

SECTION 11: Toxicological information

Acute toxicity

Oral

LD50 Mouse oral 400 mg/kg

Inhalation

Classified based on available data. For more details, see section 2

Dermal

LD50 Rat acute percutaneous >2500 mg/kg

Skin corrosion/irritation

Classified based on available data. For more details, see section 2

Serious eye damage/irritation

Classified based on available data. For more details, see section 2

Respiratory or skin sensitization

Classified based on available data. For more details, see section 2

Germ cell mutagenicity

Classified based on available data. For more details, see section 2

Carcinogenicity

Cancer Classification

Group E Evidence of Non-carcinogenicity for Humans

Reproductive toxicity

Classified based on available data. For more details, see section 2

STOT-single exposure

The substance is irritating to the eyes.

STOT-repeated exposure

Classified based on available data. For more details, see section 2

Aspiration hazard

Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly on spraying or when dispersed, especially if powdered.

SECTION 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

Bentazon can be rapidly utilized by bacteria and fungi(1). Bentazon was degraded in 8 soils with half-lives ranging from 6.7 to 15 days, and 38 to 50 days, for soils with and without a history of bentazon application, respectively(2), which suggests acclimation(SRC). In aerobic soil incubation experiments, approximately 80% of the initial bentazon applied remained after 28 days in sandy clay loam soil, in clay soil there was no significant conversion of bentazon after 30 days incubation(3). The aerobic half-life in freshly collected field soils ranged from 11 to 14 days(4,5). The average half-life of bentazon in laboratory soils was about 46 days(4,5).

12.3 Bioaccumulative potential

An estimated BCF of 79 was calculated for bentazon(SRC), using an experimental log Kow of 2.8(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.

12.4 Mobility in soil

Soil adsorption coefficient

0 (Experimental); 140 (Calculated). From table

12.5 Other adverse effects

no data available

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.

SECTION 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

SECTION 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.

SECTION 16: Other information

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/

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