

Safety data sheet

Page: 1/15

BASF Safety data sheet according to the United Nations' Globally Harmonized System (UN GHS)

Date / Revised: 20.01.2026

Version: 3.0

Product: **Bentraton**

(ID no. 30787325/SDS_CPA_IL/EN)

Date of print 24.06.2026

1. Identification

Product identifier

Bentraton

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

Relevant identified uses: crop protection product, herbicide

Details of the supplier of the safety data sheet

Company:

BASF SE

67056 Ludwigshafen

GERMANY

Operating Division Crop Protection

Telephone: +49 621 60-27777

E-mail address: Produktinformation-Pflanzenschutz@basf.com

Emergency telephone number

International emergency number:

Telephone: +49 180 2273-112

2. Hazards Identification

Classification of the substance or mixture

According to UN GHS criteria

Acute Tox. 4 (oral)
Eye Irrit. 2B
Skin Sens. 1
Repr. 2 (unborn child)
Aquatic Acute 1
Aquatic Chronic 2

For the classifications not written out in full in this section the full text can be found in section 16.

Label elements

Globally Harmonized System (GHS)

Pictogram:



Signal Word:

Warning

Hazard Statement:

H320	Causes eye irritation.
H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H361	Suspected of damaging the unborn child.
H411	Toxic to aquatic life with long lasting effects.
H400	Very toxic to aquatic life.

Precautionary Statement:

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read carefully and follow all instructions.

Precautionary Statements (Prevention):

P280	Wear protective gloves, protective clothing and eye protection or face protection.
P261	Avoid breathing mist or vapour or spray.
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P272	Contaminated work clothing should not be allowed out of the workplace.
P270	Do not eat, drink or smoke when using this product.
P264	Wash contaminated body parts thoroughly after handling.

Precautionary Statements (Response):

Safety data sheet according to the United Nations' Globally Harmonized System (UN GHS)

Date / Revised: 20.01.2026

Version: 3.0

Product: **Bentraton**

(ID no. 30787325/SDS_CPA_IL/EN)

Date of print 24.06.2026

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P330	Rinse mouth.
P308 + P313	IF exposed or concerned: Get medical advice/attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P391	Collect spillage.
P337 + P313	If eye irritation persists: Get medical attention.

Precautionary Statements (Storage):

P405 Store locked up.

Precautionary Statements (Disposal):

P501 Dispose of contents and container to hazardous or special waste collection point.

According to UN GHS criteria

Hazard determining component(s) for labelling: 3-Isopropyl-1H-2,1,3-benzothiadiazin-4(3H)-one 2,2-dioxide, sodium salt

Other hazards

According to UN GHS criteria

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

3. Composition/Information on Ingredients

Substances

Not applicable

Mixtures

Chemical nature

crop protection product, herbicide, Soluble concentrate (SL)

Hazardous ingredients (GHS)

According to UN GHS criteria

3-Isopropyl-1H-2,1,3-benzothiadiazin-4(3H)-one 2,2-dioxide, sodium salt

Safety data sheet according to the United Nations' Globally Harmonized System (UN GHS)

Date / Revised: 20.01.2026

Version: 3.0

Product: **Bentraton**

(ID no. 30787325/SDS_CPA_IL/EN)

Date of print 24.06.2026

Content (W/W): 44 %
CAS Number: 50723-80-3
EC-Number: 256-735-4

Acute Tox. 4 (oral)
Eye Irrit. 2A
Skin Sens. 1
Repr. 2 (unborn child)
Aquatic Acute 1
Aquatic Chronic 2
H319, H302, H317, H361, H411, H400

For the classifications not written out in full in this section the full text can be found in section 16.

4. First-Aid Measures

Description of first aid measures

Remove contaminated clothing.

If inhaled:

Keep patient calm, remove to fresh air, seek medical attention.

On skin contact:

Wash thoroughly with soap and water

On contact with eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

On ingestion:

Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms: Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11., (Further) symptoms and / or effects are not known so far

Hazards: Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11. (Further) symptoms and / or effects are not known so far

Indication of any immediate medical attention and special treatment needed

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:

water spray, foam, dry powder, carbon dioxide

Special hazards arising from the substance or mixture

Carbon monoxide, Carbon dioxide, nitrogen oxides, sulfur oxides
The substances/groups of substances mentioned can be released in case of fire.

Advice for fire-fighters

Special protective equipment:

Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:

Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations. In case of fire and/or explosion do not breathe fumes. Keep containers cool by spraying with water if exposed to fire.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Do not breathe vapour/spray. Use personal protective clothing. Avoid contact with the skin, eyes and clothing.

Environmental precautions

Do not discharge into drains/surface waters/groundwater. Do not discharge into the subsoil/soil.

Methods and material for containment and cleaning up

For small amounts: Pick up with suitable absorbent material (e.g. sand, sawdust, general-purpose binder, kieselguhr).

For large amounts: Dike spillage. Pump off product.

Dispose of absorbed material in accordance with regulations. Collect waste in suitable containers, which can be labeled and sealed. Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations. Wear suitable protective equipment.

7. Handling and Storage

Precautions for safe handling

No special measures necessary if stored and handled correctly. Ensure thorough ventilation of stores and work areas. When using do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift.

Protection against fire and explosion:

No special precautions necessary. The substance/product is non-combustible. Product is not explosive.

Conditions for safe storage, including any incompatibilities

Segregate from foods and animal feeds.

Further information on storage conditions: Keep away from heat. Protect from direct sunlight.

Storage stability:

Storage duration: 60 Months

Safety data sheet according to the United Nations' Globally Harmonized System (UN GHS)

Date / Revised: 20.01.2026

Version: 3.0

Product: **Bentraton**

(ID no. 30787325/SDS_CPA_IL/EN)

Date of print 24.06.2026

Protect from temperatures below: 0 °C

The product can crystallize below the limit temperature.

Protect from temperatures above: 40 °C

Changes in the properties of the product may occur if substance/product is stored above indicated temperature for extended periods of time.

Specific end use(s)

For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

8. Exposure Controls/Personal Protection

Control parameters

Components with occupational exposure limits

50723-80-3: 3-Isopropyl-1H-2,1,3-benzothiadiazin-4(3H)-one 2,2-dioxide, sodium salt
TWA value 1,23 mg/m³ (BASF recomm. occupational exposure limit)

Exposure controls

Personal protective equipment

Respiratory protection:

Suitable respiratory protection for higher concentrations or long-term effect: Combination filter for gases/vapours of organic, inorganic, acid inorganic and alkaline compounds (e.g. EN 14387 Type ABEK).

Hand protection:

Suitable chemical resistant safety gloves (EN ISO 374-1) also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN ISO 374-1): E.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), butyl rubber (0.7 mm) etc.

Eye protection:

Safety glasses with side-shields (frame goggles) (e.g. EN 166)

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

General safety and hygiene measures

The statements on personal protective equipment in the instructions for use apply when handling crop-protection agents in final-consumer packing. Wearing of closed work clothing is recommended. Store work clothing separately. Keep away from food, drink and animal feeding stuffs.

9. Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

State of matter:	liquid	
Form:	liquid	
Colour:	yellow to red to brown	
Odour:	fruity, faint odour	
Odour threshold:	Not determined due to potential health hazard by inhalation.	
Melting point:	approx. 0 °C (1.013,3 hPa)	
Boiling point:	Information applies to the solvent. approx. 100 °C (1.013,3 hPa)	
Flammability:	Information applies to the solvent. not flammable	
Lower explosion limit:	As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.	
Upper explosion limit:	As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.	
Flash point:	No flash point - Measurement made up to the boiling point.	(ISO 2719)
Auto-ignition temperature:	555 °C	(Directive 92/69/EEC, A.15)
Thermal decomposition:	160 °C, 190 kJ/kg (DSC (OECD 113)) (onset temperature)	
	Not a substance liable to self-decomposition according to UN transport regulations, class 4.1.	
SADT:	> 75 °C	
pH value:	approx. 6 - 7 (CIPAC standard water D, 1 %(m), 20 °C)	
Viscosity, kinematic:	approx. 4,45 mm ² /s (40 °C)	(calculated (from dynamic viscosity))
Viscosity, dynamic:	approx. 9 mPa.s (20 °C, 100 1/s) 5,3 mPa.s (40 °C, 100 1/s)	(OECD Guideline 114)
Thixotropy:	not thixotropic	
Solubility in water:	fully soluble	
Partitioning coefficient n-octanol/water (log Kow):	The statements are based on the properties of the individual components.	

Safety data sheet according to the United Nations' Globally Harmonized System (UN GHS)

Date / Revised: 20.01.2026

Version: 3.0

Product: **Bentraton**

(ID no. 30787325/SDS_CPA_IL/EN)

Date of print 24.06.2026

Information on: 3-Isopropyl-1H-2,1,3-benzothiadiazin-4(3H)-one 2,2-dioxide, sodium salt

*Partitioning coefficient n-octanol/water (log Kow): 0,67
(20 °C; pH value: 5)*

Vapour pressure: approx. 23,4 hPa
Information applies to the solvent.
Density: approx. 1,19 g/cm³ (OECD Guideline 109)
(20 °C)

Relative vapour density (air):
not determined

Particle characteristics

Particle size distribution: The substance / product is marketed or used in a non solid or granular form. -

9.2. Other information

Information with regard to physical hazard classes

Explosives

Explosion hazard: Based on the chemical structure there is no indication of explosive properties.

Oxidizing properties

Fire promoting properties: Based on its structural properties the product is not classified as oxidizing.

10. Stability and Reactivity

Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

Chemical stability

The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions

No hazardous reactions if stored and handled as prescribed/indicated.

Conditions to avoid

See SDS section 7 - Handling and storage.

Incompatible materials

Substances to avoid:
strong bases, strong acids, strong oxidizing agents

Hazardous decomposition products

Hazardous decomposition products:

No hazardous decomposition products if stored and handled as prescribed/indicated.

11. Toxicological Information

Information on toxicological effects

Acute toxicity

Assessment of acute toxicity:

Of moderate toxicity after single ingestion. Virtually nontoxic after a single skin contact. Virtually nontoxic by inhalation.

Experimental/calculated data:

LD50 rat (oral): > 1.000 - < 2.000 mg/kg (OECD Guideline 401)

LC50 rat (by inhalation): > 4,8 mg/l 4 h (OECD Guideline 403)

No mortality was observed. An aerosol was tested.

LD50 rat (dermal): > 4.000 mg/kg (OECD Guideline 402)

No mortality was observed.

Irritation

Assessment of irritating effects:

Eye contact causes irritation. Not irritating to the skin.

Experimental/calculated data:

Skin corrosion/irritation rabbit: non-irritant

Serious eye damage/irritation rabbit: Irritant.

Respiratory/Skin sensitization

Assessment of sensitization:

Sensitization after skin contact possible. The product has not been tested. The statement has been derived from the properties of the individual components.

| *Information on: 3-Isopropyl-1H-2,1,3-benzothiadiazin-4(3H)-one 2,2-dioxide, sodium salt*

| *Experimental/calculated data:*

| *Guinea pig maximization test guinea pig: skin sensitizing (OECD Guideline 406)*

Germ cell mutagenicity

Assessment of mutagenicity:

Mutagenicity tests revealed no genotoxic potential. The product has not been tested. The statement has been derived from the properties of the individual components.

Carcinogenicity

Assessment of carcinogenicity:

The results of various animal studies gave no indication of a carcinogenic effect. The product has not been tested. The statement has been derived from the properties of the individual components.

Reproductive toxicity

Assessment of reproduction toxicity:

The results of animal studies gave no indication of a fertility impairing effect. The product has not been tested. The statement has been derived from the properties of the individual components.

Developmental toxicity

Assessment of teratogenicity:

The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: 3-Isopropyl-1H-2,1,3-benzothiadiazin-4(3H)-one 2,2-dioxide, sodium salt

Assessment of teratogenicity:

Indications of possible developmental toxicity/teratogenicity were seen in animal studies. The substance did not cause malformations in animal studies. When given in high doses fetotoxicity was observed.

Specific target organ toxicity (single exposure)

Assessment of STOT single:

Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

Remarks: The product has not been tested. The statement has been derived from the properties of the individual components.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

Assessment of repeated dose toxicity:

No substance-specific organotoxicity was observed after repeated administration to animals. The product has not been tested. The statement has been derived from the properties of the individual components.

Aspiration hazard

| not applicable

Other relevant toxicity information

Misuse can be harmful to health.

12. Ecological Information

Toxicity

Assessment of aquatic toxicity:

| Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Safety data sheet according to the United Nations' Globally Harmonized System (UN GHS)

Date / Revised: 20.01.2026

Version: 3.0

Product: **Bentraton**

(ID no. 30787325/SDS_CPA_IL/EN)

Date of print 24.06.2026

| The product has not been tested. The statement has been derived from the properties of the individual components.

| *Information on: 3-Isopropyl-1H-2,1,3-benzothiadiazin-4(3H)-one 2,2-dioxide, sodium salt*
Toxicity to fish:

LC50 (96 h) > 100 mg/l, Oncorhynchus mykiss (EPA 72-1, static)

| *Information on: 3-Isopropyl-1H-2,1,3-benzothiadiazin-4(3H)-one 2,2-dioxide, sodium salt*
Aquatic invertebrates:

EC50 (48 h) > 100 mg/l, Daphnia magna (OECD Guideline 202, part 1)

| *Information on: 3-Isopropyl-1H-2,1,3-benzothiadiazin-4(3H)-one 2,2-dioxide, sodium salt*
Aquatic plants:

| *EC50 (72 h) 34,5 mg/l (growth rate), Pseudokirchneriella subcapitata*

| *EC10 (72 h) 9 mg/l, Pseudokirchneriella subcapitata*

| *EC50 (14 d) 0,595 mg/l, aquatic plant*

| *EC10 (14 d) 0,172 mg/l, aquatic plant*

| *No observed effect concentration 0,278 mg/l, aquatic plant*

| *EC50 (14 d) 3,48 mg/l, aquatic plant*

EC10 (14 d) 0,5 mg/l, aquatic plant

| *Information on: 3-Isopropyl-1H-2,1,3-benzothiadiazin-4(3H)-one 2,2-dioxide, sodium salt*
Chronic toxicity to fish:

No observed effect concentration (35 d) > 9,16 mg/l, Pimephales promelas

| *Information on: 3-Isopropyl-1H-2,1,3-benzothiadiazin-4(3H)-one 2,2-dioxide, sodium salt*
Chronic toxicity to aquatic invertebrates:

No observed effect concentration (21 d) > 91,6 mg/l, Daphnia magna

Persistence and degradability

Assessment biodegradation and elimination (H₂O):

The product has not been tested. The statement has been derived from the properties of the individual components.

| *Information on: 3-Isopropyl-1H-2,1,3-benzothiadiazin-4(3H)-one 2,2-dioxide, sodium salt*
Assessment biodegradation and elimination (H₂O):

Not readily biodegradable (by OECD criteria).

Bioaccumulative potential

Assessment bioaccumulation potential:

The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: 3-Isopropyl-1H-2,1,3-benzothiadiazin-4(3H)-one 2,2-dioxide, sodium salt

Bioaccumulation potential:

Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

Mobility in soil

Assessment transport between environmental compartments:

Adsorption in soil: The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: 3-Isopropyl-1H-2,1,3-benzothiadiazin-4(3H)-one 2,2-dioxide, sodium salt

Assessment transport between environmental compartments:

Adsorption in soil: Following exposure to soil, the product trickles away and can - dependant on degradation - be transported to deeper soil areas with larger water loads.

Other adverse effects

The product does not contain substances that are listed in the Montreal Protocol on substances that deplete the ozone layer.

Additional information

Other ecotoxicological advice:

Do not discharge product into the environment without control.

13. Disposal Considerations

Waste treatment methods

Must be sent to a suitable incineration plant, observing local regulations.

Contaminated packaging:

Contaminated packaging should be emptied as far as possible and disposed of in the same manner as the substance/product.

14. Transport Information

Land transport

Safety data sheet according to the United Nations' Globally Harmonized System (UN GHS)

Date / Revised: 20.01.2026

Version: 3.0

Product: **Bentraton**

(ID no. 30787325/SDS_CPA_IL/EN)

Date of print 24.06.2026

ADR

UN number or ID number: UN3082
UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S. (3-ISOPROPYL-1H-2,1,3-BENZOTHIADIAZIN-4(3H)-ONE
2,2-DIOXIDE, SODIUM SALT)

Transport hazard class(es): 9, EHSM
Packing group: III
Environmental hazards: yes
Special precautions for user: None known

RID

UN number or ID number: UN3082
UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S. (3-ISOPROPYL-1H-2,1,3-BENZOTHIADIAZIN-4(3H)-ONE
2,2-DIOXIDE, SODIUM SALT)

Transport hazard class(es): 9, EHSM
Packing group: III
Environmental hazards: yes
Special precautions for user: None known

Inland waterway transport**ADN**

UN number or ID number: UN3082
UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S. (3-ISOPROPYL-1H-2,1,3-BENZOTHIADIAZIN-4(3H)-ONE
2,2-DIOXIDE, SODIUM SALT)

Transport hazard class(es): 9, EHSM
Packing group: III
Environmental hazards: yes
Special precautions for user: None known

Transport in inland waterway vessel

Not evaluated

Sea transport**IMDG**

UN number or ID number: UN 3082
UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S. (3-ISOPROPYL-1H-2,1,3-BENZOTHIADIAZIN-4(3H)-ONE
2,2-DIOXIDE, SODIUM SALT)

Safety data sheet according to the United Nations' Globally Harmonized System (UN GHS)

Date / Revised: 20.01.2026

Version: 3.0

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(ID no. 30787325/SDS_CPA_IL/EN)

Date of print 24.06.2026

Transport hazard class(es):	9, EHSM
Packing group:	III
Environmental hazards:	yes
	Marine pollutant: YES
Special precautions for user:	EmS: F-A; S-F

Air transport

IATA/ICAO

UN number or ID number:	UN 3082
UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (3-ISOPROPYL-1H-2,1,3-BENZOTHIADIAZIN-4(3H)-ONE 2,2-DIOXIDE, SODIUM SALT)

Transport hazard class(es):	9, EHSM
Packing group:	III
Environmental hazards:	yes
Special precautions for user:	None known

Maritime transport in bulk according to IMO instruments

Maritime transport in bulk is not intended.

Further information

Product may be shipped as non-hazardous in suitable packages containing a net quantity of 5 L or less under the provisions of various regulatory agencies: ADR, RID, ADN: Special Provision 375; IMDG: 2.10.2.7; IATA: A197; TDG: Special Provision 99(2); 49CFR: §171.4 (c) (2) and also the Special Provision 375 in Appendix B which is regulated in China "Regulations Concerning Road Transportation of Dangerous Goods Part 3: Index of dangerous goods name and transportation requirements" (JT/T 617.3)

15. Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

To avoid risks to man and the environment, comply with the instructions for use.

16. Other Information

Full text of classifications, hazard symbols and hazard statements, if mentioned in section 2 or 3:

Acute Tox.	Acute toxicity
Eye Irrit.	Eye irritation
Skin Sens.	Skin sensitization
Repr.	Reproductive toxicity

Safety data sheet according to the United Nations' Globally Harmonized System (UN GHS)

Date / Revised: 20.01.2026

Version: 3.0

Product: **Bentraton**

(ID no. 30787325/SDS_CPA_IL/EN)

Date of print 24.06.2026

Aquatic Acute	Hazardous to the aquatic environment - acute
Aquatic Chronic	Hazardous to the aquatic environment - chronic
H319	Causes serious eye irritation.
H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H361	Suspected of damaging the unborn child.
H411	Toxic to aquatic life with long lasting effects.
H400	Very toxic to aquatic life.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.

Vertical lines in the left hand margin indicate an amendment from the previous version.