

# Safety Data Sheet

## Zidua SC Herbicide

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### 1. Identification

#### Product identifier used on the label

## Zidua SC Herbicide

#### Recommended use of the chemical and restriction on use

Recommended use\*: crop protection product, herbicide

\* The "Recommended use" identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

#### Details of the supplier of the safety data sheet

Company:  
BASF CORPORATION  
100 Park Avenue  
Florham Park, NJ 07932, USA

Telephone: +1 973 245-6000

#### Emergency telephone number

CHEMTREC: 1-800-424-9300  
BASF HOTLINE: 1-800-832-HELP (4357)

#### Other means of identification

Substance number: 904612  
EPA Registration number: 7969-374  
Synonyms: Pyroxasulfone

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### 2. Hazards Identification

#### According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

#### Classification of the product

STOT RE	2	Specific target organ toxicity — repeated exposure
Aquatic Acute	1	Hazardous to the aquatic environment - acute
Aquatic Chronic	1	Hazardous to the aquatic environment - chronic

#### Label elements

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Pictogram:



Signal Word:  
Warning

Hazard Statement:

H373 May cause damage to organs through prolonged or repeated exposure.  
H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements (Prevention):

P280 Wear protective gloves.  
P273 Avoid release to the environment.  
P260 Do not breathe dust/gas/mist/vapours.  
P272 Contaminated work clothing should not be allowed out of the workplace.

Precautionary Statements (Response):

P314 Get medical advice/attention if you feel unwell.  
P303 + P352 IF ON SKIN (or hair): Wash with plenty of soap and water.  
P333 + P311 If skin irritation or rash occurs: Call a POISON CENTER or physician.  
P391 Collect spillage.  
P362 + P364 Take off contaminated clothing and wash it before reuse.

Precautionary Statements (Disposal):

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

### Hazards not otherwise classified

Labeling of special preparations (GHS):

May produce an allergic reaction. Contains: 1,2-benzisothiazol-3(2H)-one  
The substance may cause sensitization of the skin in particularly sensitive individuals. Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

Product contains the following components and may cause an allergic skin reaction: 1,2-benzisothiazol-3(2H)-one, 5-chloro-2-methyl-2H-isothiazol-3-one, 2-Methyl-4-Isothiazolin-3-one

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### 3. Composition / Information on Ingredients

**According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200**

Pyroxasulfone

CAS Number: 447399-55-5  
Content (W/W): 41.47 %  
Synonym: KIH-485 TG

Propylene glycol

CAS Number: 57-55-6  
Content (W/W): 5.0 - 10.0%  
Synonym: Propylene glycol

bronopol

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CAS Number: 52-51-7  
Content (W/W): < 0.1%  
Synonym: 2-Bromo-2-nitro-1,3-propanediol; Bronopol

1,2-benzisothiazol-3(2H)-one  
CAS Number: 2634-33-5  
Content (W/W): < 0.1%  
Synonym: No data available.

5-chloro-2-methyl-2H-isothiazol-3-one  
CAS Number: 26172-55-4  
Content (W/W): < 0.1%  
Synonym: 5-Chloro-2-methyl-4-isothiazolin-3-one; 5-Chloro-2-methyl-2H-isothiazol-3-one

2-Methyl-4-Isothiazolin-3-one  
CAS Number: 2682-20-4  
Content (W/W): < 0.1%  
Synonym: Kathon CG 243

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## 4. First-Aid Measures

### Description of first aid measures

#### General advice:

Remove contaminated clothing.

#### If inhaled:

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

#### If on skin:

Wash thoroughly with soap and water

#### If in eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open.

#### If swallowed:

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

### Indication of any immediate medical attention and special treatment needed

#### Note to physician

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

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### 5. Fire-Fighting Measures

#### Extinguishing media

Suitable extinguishing media:  
water spray, dry powder, foam, carbon dioxide

#### Special hazards arising from the substance or mixture

Hazards during fire-fighting:

carbon monoxide, carbon dioxide, Hydrogen chloride, hydrogen fluoride, hydrogen bromide, nitrogen oxides, sulfur oxides, halogenated compounds

The substances/groups of substances mentioned can be released in case of fire.

#### Advice for fire-fighters

Protective equipment for fire-fighting:

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

#### Further information:

Keep containers cool by spraying with water if exposed to fire. In case of fire and/or explosion do not breathe fumes. 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.

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

#### Methods and material for containment and cleaning up

Dike spillage. Pick up with suitable absorbent material. Place into suitable containers for reuse or disposal in a licensed facility. Spilled substance/product should be recovered and applied according to label rates whenever possible. If application of spilled substance/product is not possible, then spills should be contained, solidified, and placed in suitable containers for disposal. After decontamination, spill area can be washed with water. Collect wash water for approved disposal.

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### 7. Handling and Storage

#### Precautions for safe handling

RECOMMENDATIONS ARE FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS. PESTICIDE APPLICATORS & WORKERS must refer to the Product Label and Directions for Use attached to the product for Agricultural Use Requirements in accordance with the EPA Worker Protection Standard 40 CFR part 170. Ensure adequate ventilation. Keep away from sources of ignition - No smoking. Keep container tightly sealed. Protect against heat. Handle and open container with care. Do not open until ready to use. Once container is opened, content should be used as soon as possible. Avoid aerosol formation. Avoid dust formation. Provide means for controlling leaks and spills. Do not return residues to the storage containers. Follow label warnings even after container is emptied. The substance/ product may be handled only by appropriately trained personnel. Avoid all direct contact with the substance/product. Avoid contact with the skin, eyes and clothing. Avoid inhalation of dusts/mists/vapours. Wear suitable personal protective clothing and equipment.

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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.

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## 8. Exposure Controls/Personal Protection

Users of a pesticidal product should refer to the product label for personal protective equipment requirements.

No occupational exposure limits known.

### Personal protective equipment

#### RECOMMENDATIONS FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS:

##### **Respiratory protection:**

Wear respiratory protection if ventilation is inadequate. Wear a NIOSH-certified (or equivalent) particulate respirator.

##### **Hand protection:**

Chemical resistant protective gloves, Protective glove selection must be based on the user's assessment of the workplace hazards.

##### **Eye protection:**

Safety glasses with side-shields. Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

##### **Body protection:**

Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.

##### **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.

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## 9. Physical and Chemical Properties

Form:	suspension
Odour:	odourless
Odour threshold:	not applicable, odour not perceivable
Colour:	milky white
pH value:	approx. 5.5 - 7.5 ( 1 %(m), 23 °C)
Melting point:	approx. > 0 °C Information applies to the solvent.

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Boiling point:	approx. 100 °C ( 1,013 hPa) Information applies to the solvent.
Flash point:	No flash point - Measurement made up to the boiling point.
Flammability:	not applicable
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.
Autoignition:	360 °C
Vapour pressure:	approx. 23 hPa ( 20 °C) Information applies to the solvent.
Density:	approx. 1.21 g/cm <sup>3</sup> ( 20 °C)
Vapour density:	not applicable
Partitioning coefficient n-octanol/water (log Pow):	Information based on the main components. <i>Information on: pyroxasulfone</i>
Partitioning coefficient n-octanol/water (log Pow):	2.39 ( 25 °C)
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Thermal decomposition:	210 °C, 240 kJ/kg (onset temperature) Not a substance liable to self-decomposition according to UN transport regulations, class 4.1.
Viscosity, dynamic:	approx. 57.1 mPa.s ( 20 °C)
Solubility in water:	dispersible
Evaporation rate:	not applicable
Other Information:	The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

## 10. Stability and Reactivity

### Reactivity

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

Oxidizing properties:  
not fire-propagating

### 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

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See SDS section 7 - Handling and storage.

### Incompatible materials

strong acids, strong bases, strong oxidizing agents

### Hazardous decomposition products

Decomposition products:

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

Thermal decomposition:

210 °C

(onset temperature) Not a substance liable to self-decomposition according to UN transport regulations, class 4.1.

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## 11. Toxicological information

### Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

### Acute Toxicity/Effects

#### Acute toxicity

Assessment of acute toxicity: The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. Virtually nontoxic after a single ingestion. Virtually nontoxic by inhalation. Virtually nontoxic after a single skin contact.

#### Oral

Type of value: LD50

Species: rat

Value: > 2,000 mg/kg

No mortality was observed.

#### Inhalation

Type of value: LC50

Species: rat (male/female)

Value: > 3.8 mg/l

Exposure time: 4 h

No mortality was observed. Highest concentration available for testing.

#### Dermal

Type of value: LD50

Species: rat

Value: > 5,000 mg/kg

No mortality was observed.

#### Assessment other acute effects

Assessment of STOT single:

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

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

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### Irritation / corrosion

Assessment of irritating effects: The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. Not irritating to the skin. Not irritating to the eyes.

### Skin

Species: rabbit  
Result: non-irritant

### Eye

Species: rabbit  
Result: non-irritant

### Sensitization

Assessment of sensitization: The product has not been tested. The statement has been derived from the properties of the individual components. Sensitization after skin contact possible. The product contains 1,2-benzisothiazolin-3-one (CAS-No.: 2634-33-5). The product contains 2-methyl-4-isothiazolin-3-one (CAS-No.: 2682-20-4). The substance may cause sensitization of the skin in particularly sensitive individuals. Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

*Information on: mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)*

*Mouse Local Lymph Node Assay (LLNA)*

*Species: mouse*

*Result: sensitizing*

*Method: OECD Guideline 429*

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### Aspiration Hazard

The product has not been tested. The statement has been derived from the properties of the individual components. No aspiration hazard expected.

## **Chronic Toxicity/Effects**

### Repeated dose toxicity

Assessment of repeated dose toxicity: The product has not been tested. The statement has been derived from the properties of the individual components.

*Information on: pyroxasulfone*

*Assessment of repeated dose toxicity: Repeated oral exposure to small quantities may affect certain organs.*

*Information on: bronopol*

*Assessment of repeated dose toxicity: After repeated exposure the prominent effect is local irritation.*

*Information on: mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)*

*Assessment of repeated dose toxicity: After repeated exposure the prominent effect is local irritation. Based on available Data, the classification criteria are not met.*

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### Genetic toxicity

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



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*Information on: bronopol*

*Assessment of mutagenicity: The substance was mutagenic in a mammalian cell culture test system. No mutagenic effect was found in various tests with bacteria and mammals.*

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### Carcinogenicity

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

*Information on: pyroxasulfone*

*Assessment of carcinogenicity: When given in high doses, the substance was carcinogenic in animal studies. Based on its mechanism of action, a carcinogenic potential is not expected after exposure to low doses.*

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### Reproductive toxicity

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

### Teratogenicity

Assessment of teratogenicity: The product has not been tested. The statement has been derived from the properties of the individual components. Animal studies gave no indication of a developmental toxic effect at doses that were not toxic to the parental animals.

### Other Information

Misuse can be harmful to health.

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## 12. Ecological Information

### **Toxicity**

#### Aquatic toxicity

Assessment of aquatic toxicity:

Very toxic to aquatic life with long lasting effects.

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

#### Toxicity to fish

*Information on: pyroxasulfone*

*LC50 (96 h) > 2.2 mg/l, *Oncorhynchus mykiss**

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#### Aquatic invertebrates

*Information on: pyroxasulfone*

*EC50 (48 h) > 4.4 mg/l, *daphnia**

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#### Aquatic plants

*Information on: Pyroxasulfone*

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*EC10 (96 h) 0.00035 mg/l, Pseudokirchneriella subcapitata*  
*EC50 (96 h) 0.00079 mg/l, Pseudokirchneriella subcapitata*  
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### Chronic toxicity to fish

*Information on: pyroxasulfone*  
*No observed effect concentration (28 d) 2.0 mg/l, Pimephales promelas*  
-----

### Chronic toxicity to aquatic invertebrates

*Information on: pyroxasulfone*  
*No observed effect concentration (21 d) 1.9 mg/l, Daphnia sp.*  
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## **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.

### Assessment biodegradation and elimination (H2O)

*Information on: pyroxasulfone*

*Not readily biodegradable (by OECD criteria).*  
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## **Bioaccumulative potential**

### Assessment bioaccumulation potential

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

### Assessment bioaccumulation potential

*Information on: pyroxasulfone*  
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## **Mobility in soil**

### Assessment transport between environmental compartments

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

*Information on: Pyroxasulfone*

*Following exposure to soil, the product trickles away and can - dependant on degradation - be transported to deeper soil areas with larger water loads.*  
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## **Additional information**

Other ecotoxicological advice:

Do not discharge product into the environment without control.

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### 13. Disposal considerations

#### **Waste disposal of substance:**

Pesticide wastes are regulated. Improper disposal of excess pesticide, spray mix or rinsate is a violation of federal law. If pesticide wastes cannot be disposed of according to label instructions, contact the State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

#### **Container disposal:**

Rinse thoroughly at least three times (triple rinse) in accordance with EPA recommendations. Consult state or local disposal authorities for approved alternative procedures such as container recycling. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

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### 14. Transport Information

#### **Land transport**

USDOT

Not classified as a dangerous good under transport regulations

#### **Sea transport**

IMDG

Hazard class: 9  
Packing group: III  
ID number: UN 3082  
Hazard label: 9, EHSM  
Marine pollutant: YES  
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains PYROXASULFONE)

#### **Air transport**

IATA/ICAO

Hazard class: 9  
Packing group: III  
ID number: UN 3082  
Hazard label: 9, EHSM  
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains PYROXASULFONE)

#### **Further information**

The following provisions may apply for product in packages containing a net quantity of 5 L or less  
ADR, RID, ADN: Special Provision 375;  
IMDG: 2.10.2.7;  
IATA: A197;  
TDG: Special Provision 99(2);  
49CFR: §171.4 (c) (2).

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### 15. Regulatory Information

#### **Federal Regulations**

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### Registration status:

Crop Protection TSCA, US released / exempt

Chemical TSCA, US blocked / not listed

**EPCRA 311/312 (Hazard categories):** Refer to SDS section 2 for GHS hazard classes applicable for this product.

### State regulations

<u>State RTK</u>	<u>CAS Number</u>	<u>Chemical name</u>
NJ	57-55-6	Propylene glycol
PA	57-55-6	Propylene glycol

### Safe Drinking Water & Toxic Enforcement Act, CA Prop. 65:

**WARNING:** This product can expose you to chemicals including ETHYLENE OXIDE, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

### Labeling requirements under FIFRA

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label.

CAUTION:  
KEEP OUT OF REACH OF CHILDREN.  
HARMFUL IF SWALLOWED.  
Wash thoroughly after handling.

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## 16. Other Information

### SDS Prepared by:

BASF NA Product Regulations  
SDS Prepared on: 2020/08/11

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

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IMPORTANT: WHILE THE DESCRIPTIONS, DESIGNS, DATA AND INFORMATION CONTAINED HEREIN ARE PRESENTED IN GOOD FAITH AND BELIEVED TO BE ACCURATE, IT IS PROVIDED FOR YOUR GUIDANCE ONLY. BECAUSE MANY FACTORS MAY AFFECT PROCESSING OR APPLICATION/USE, WE RECOMMEND THAT YOU MAKE TESTS TO DETERMINE THE SUITABILITY OF A PRODUCT FOR YOUR PARTICULAR PURPOSE PRIOR

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