We create chemistry

Safety Data Sheet
Zidua SC Herbicide

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

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

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

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

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

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.

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.

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.

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.

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.

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.

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.

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/cm3 (20 °C)
Vapour density:	not applicable
Partitioning coefficient n-octanol/water (log Pow):	Information based on the main components.
Information on: pyroxasulfone	
Partitioning coefficient n-octanol/water (log Pow):	2.39 (25 °C)
---	---
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

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.

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.

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

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.

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

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.

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.

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.

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

Aquatic invertebrates

Information on: pyroxasulfone
EC50 (48 h) > 4.4 mg/l, daphnia

Aquatic plants

Information on: Pyroxasulfone

EC10 (96 h) 0.00035 mg/l, Pseudokirchneriella subcapitata
EC50 (96 h) 0.00079 mg/l, Pseudokirchneriella subcapitata

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.

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).

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

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.

Additional information

Other ecotoxicological advice:
Do not discharge product into the environment without control.

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.

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).

15. Regulatory Information

Federal Regulations

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

State RTK	CAS Number	Chemical name
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.

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.

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.

TO USE. NO WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH, OR THAT THE PRODUCTS, DESIGNS, DATA OR INFORMATION MAY BE USED WITHOUT INFRINGING THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS. IN NO CASE SHALL THE DESCRIPTIONS, INFORMATION, DATA OR DESIGNS PROVIDED BE CONSIDERED A PART OF OUR TERMS AND CONDITIONS OF SALE. FURTHER, YOU EXPRESSLY UNDERSTAND AND AGREE THAT THE DESCRIPTIONS, DESIGNS, DATA, AND INFORMATION FURNISHED BY OUR COMPANY HEREUNDER ARE GIVEN GRATIS AND WE ASSUME NO OBLIGATION OR LIABILITY FOR THE DESCRIPTION, DESIGNS, DATA AND INFORMATION GIVEN OR RESULTS OBTAINED, ALL SUCH BEING GIVEN AND ACCEPTED AT YOUR RISK.
END OF DATA SHEET