

Safety Data Sheet

Zidua Pro powered by Kixor Herbicide

Revision date : 2023/06/26

Version: 4.0

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(30658778/SDS_CPA_US/EN)

1. Identification

Product identifier used on the label

Zidua Pro powered by Kixor Herbicide

Recommended use of the chemical and restriction on use

Recommended use*: crop protection product, herbicide

Unsuitable for use: Uses other than recommended

* 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

24 Hour Emergency Response Information

CHEMTREC: 1-800-424-9300

BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification

Substance number: 764615

Synonyms: Saflufenacil + Imazethapyr + Pyroxasulfone

2. Hazards Identification

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

Classification of the product

Repr.	2 (unborn child)	Reproductive toxicity
STOT RE	2 (oral)	Specific target organ toxicity — repeated exposure
Aquatic Acute	1	Hazardous to the aquatic environment - acute

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Aquatic Chronic

1

Hazardous to the aquatic environment - chronic

Label elements

Pictogram:



Signal Word:
Warning

Hazard Statement:

H361 Suspected of damaging the unborn child.
H373 May cause damage to organs (Kidney, Liver, Heart, Nervous system) through prolonged or repeated exposure (oral).
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements (Prevention):

P273 Avoid release to the environment.
P280 Wear protective gloves, protective clothing and eye protection or face protection.
P260 Do not breathe mist or vapour.
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.

Precautionary Statements (Response):

P308 + P313 IF exposed or concerned: Get medical attention.
P391 Collect spillage.

Precautionary Statements (Storage):

P405 Store locked up.

Precautionary Statements (Disposal):

P501 Dispose of contents/container in accordance with local regulations.

Hazards not otherwise classified

Labeling of special preparations (GHS):

May produce an allergic reaction. Contains: mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

3. Composition / Information on Ingredients

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

saflufenacil

CAS Number: 372137-35-4
Content (W/W): 4.81 %
Synonym: Saflufenacil

Imazethapyr

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CAS Number: 81335-77-5

Content (W/W): 13.45 %

Synonym: 3-Pyridinecarboxylic acid, 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-5-ethyl-

Pyroxasulfone

CAS Number: 447399-55-5

Content (W/W): 23.06 %

Synonym: pyroxasulfone technical

Residues (petroleum), catalytic reformer fractionator, sulfonated, polymers with formaldehyde, sodium salts

CAS Number: 68425-94-5

Content (W/W): ≥ 1.0 - $< 5.0\%$

Synonym: Residues (petroleum), catalytic reformer fractionator, sulfonated, polymers with formaldehyde, sodium salts

Benzenesulfonic acid, hydroxy-, polymer with formaldehyde, phenol and urea, sodium salt

Content (W/W): ≥ 1.0 - $< 3.0\%$

Synonym: No data available.

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

CAS Number: 55965-84-9

Content (W/W): > 0.0 - $< 0.1\%$

Synonym: 5-Chloro-2-methyl-3(2H)-isothiazolone mixt. with 2-methyl-3(2H)-isothiazolone

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

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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 fluoride, Hydrogen chloride, hydrogen bromide, nitrogen oxides, sulfur oxides, halogenated compounds, silica 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

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accordance with the EPA Worker Protection Standard 40 CFR part 170. Ensure adequate ventilation. Provide good ventilation of working area (local exhaust ventilation if necessary). Keep away from sources of ignition - No smoking. Keep container tightly sealed. Protect against heat. Protect contents from the effects of light. Protect from air. 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. 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.

Protect from temperatures below: -5 °C

Characteristics of the product are irreversibly changed below the limit temperature.

Protect from temperatures above: 40 °C

Damage by exceeding the maximum temperature is reversible.

8. Exposure Controls/Personal Protection

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

Components with occupational exposure limits

Saflufenacil TWA value 0.824 mg/m³ ;

Pyroxasulfone TWA value 0.138 mg/m³ ;

Advice on system design:

Whenever possible, engineering controls should be used to minimize the need for personal protective equipment.

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) TC23C Chemical/Mechanical type filter system to remove a combination of particles, gas and vapours. For situations where the airborne concentrations may exceed the level for which an air purifying respirator is effective, or where the levels are unknown or Immediately Dangerous to Life or Health (IDLH), use NIOSH-certified full facepiece pressure demand self-contained breathing apparatus (SCBA) or a full facepiece pressure demand supplied-air respirator (SAR) with escape provisions.

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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. Wear face shield or tightly fitting safety goggles (chemical goggles) 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:	liquid, suspension	
Odour:	odourless	
Odour threshold:	not applicable, odour not perceivable	
Colour:	cream, almost white	
pH value:	approx. 2 - 4 (1 %(m), 20 °C)	
Melting point:	approx. 0 °C Information applies to the solvent.	
Boiling point:	approx. 100 °C Information applies to the solvent.	
Flash point:	> 100 °C No flash point - Measurement made up to the indicated temperature, pilot light extinguishes.	
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:	approx. 390 °C	(Regulation 440/2008/EC, A.15)
SADT:	> 75 °C	
Vapour pressure:	approx. 23.4 hPa (20 °C) Information applies to the solvent.	
Density:	approx. 1.19 g/cm ³ (20 °C)	
Vapour density:	not applicable	

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Partitioning coefficient n-octanol/water (log Pow):	The statements are based on the properties of the individual components.
Thermal decomposition:	170 °C, 300 kJ/kg (onset temperature) Not a substance liable to self-decomposition according to UN transport regulations, class 4.1.
Viscosity, dynamic:	approx. 159 mPa.s (20 °C) approx. 156 mPa.s (40 °C)
Viscosity, kinematic:	approx. 133 mm ² /s (40 °C)
Solubility in water:	emulsifiable
Evaporation rate:	not applicable
Other Information:	If necessary, information on other physical and chemical parameters is indicated in this section.

10. Stability and Reactivity

Reactivity

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

Oxidizing properties:

not fire-propagating (Regulation 440/2008/EC, A.21)

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:

170 °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

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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: 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 (OECD Guideline 423)

No mortality was observed.

Inhalation

Type of value: LC50

Species: rat

Value: > 3.5 mg/l (OECD Guideline 403)

Exposure time: 4 h

An aerosol was tested.

No mortality was observed. Highest concentration technically achievable.

Dermal

Type of value: LD50

Species: rat

Value: > 5,000 mg/kg (OECD Guideline 402)

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: Not irritating to eyes and skin.

Skin

Species: rabbit

Result: non-irritant

Method: OECD Guideline 404

Eye

Species: rabbit

Result: non-irritant

Method: OECD Guideline 405

Sensitization

Assessment of sensitization: No sensitizing effect.

Buehler test

Species: guinea pig

Result: Non-sensitizing.

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Method: OECD Guideline 406

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: 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.

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.

Information on: saflufenacil

Assessment of teratogenicity: Indications of possible developmental toxicity/teratogenicity were seen in animal studies.

Other Information

Misuse can be harmful to health.

12. Ecological Information

Toxicity

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Aquatic toxicity
Assessment of aquatic toxicity:
Very toxic to aquatic life with long lasting effects.

Toxicity to fish
LC50 (96 h) > 100 mg/l, Pimephales promelas (OECD Guideline 203)

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

Aquatic plants
EC50 (72 h) 0.0119 mg/l, Pseudokirchneriella subcapitata (OECD Guideline 201)
EC10 (72 h) 0.00502 mg/l, Pseudokirchneriella subcapitata (OECD Guideline 201)

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).

Information on: Imazethapyr

Not readily biodegradable (by OECD criteria).

Information on: saflufenacil

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

Information on: Imazethapyr

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

Information on: saflufenacil

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

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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: Imazethapyr

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

Information on: saflufenacil

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, IMAZETHAPYR)

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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, IMAZETHAPYR)

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

Federal Regulations

Registration status:

Crop Protection TSCA, US released / exempt

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

State regulations

State RTK

NJ

PA

CAS Number

57-55-6

57-55-6

Chemical name

Propylene glycol

Propylene glycol

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

WARNING: This product can expose you to chemicals including FORMALDEHYDE (GAS), which is known to the State of California to cause cancer, and METHANOL, which is known to the State of California to cause birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

NFPA Hazard codes:

Health: 1

Fire: 1

Reactivity: 0

Special:

Labeling requirements under FIFRA

This chemical is a pesticide product regulated 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:

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KEEP OUT OF REACH OF CHILDREN.

Hazards to humans and domestic animals.

HARMFUL IF SWALLOWED.

Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

16. Other Information

SDS Prepared by:

BASF NA Product Regulations

SDS Prepared on: 2023/06/26

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.

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 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.

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