

# Safety Data Sheet

## ZIDUA PRO POWERED BY KIXOR HERBICIDE

Revision date : 2016/07/18

Version: 1.0

Page: 1/12

(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\*: 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 SE  
67056 Ludwigshafen  
GERMANY

Contact address:  
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: 764615

---

### 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
Aquatic Chronic	1	Hazardous to the aquatic environment - chronic

#### Label elements

# Safety Data Sheet

## ZIDUA PRO POWERED BY KIXOR HERBICIDE

Revision date : 2016/07/18  
Version: 1.0

Page: 2/12  
(30658778/SDS\_CPA\_US/EN)

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/eye protection/face protection.  
P260 Do not breathe dust/gas/mist/vapours.  
P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.

Precautionary Statements (Response):

P314 Get medical advice/attention if you feel unwell.  
P391 Collect spillage.  
P308 + P311 IF exposed or concerned: Call a POISON CENTER or doctor/physician.

Precautionary Statements (Storage):

P405 Store locked up.

Precautionary Statements (Disposal):

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

---

### 3. Composition / Information on Ingredients

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

<u>CAS Number</u>	<u>Weight %</u>	<u>Chemical name</u>
447399-55-5	23.1 %	Pyroxasulfone
81335-77-5	13.5 %	3-Pyridinecarboxylic acid, 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-5-ethyl-
372137-35-4	4.8 %	saflufenacil
57-55-6	< 10.0%	Propylene glycol

---

### 4. First-Aid Measures

**Description of first aid measures**

**General advice:**

Remove contaminated clothing.

# Safety Data Sheet

## ZIDUA PRO POWERED BY KIXOR HERBICIDE

Revision date : 2016/07/18  
Version: 1.0

Page: 3/12  
(30658778/SDS\_CPA\_US/EN)

### **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: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11., Further important symptoms and effects are so far not known.

### **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, nitrogen oxides  
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.

# Safety Data Sheet

## ZIDUA PRO POWERED BY KIXOR HERBICIDE

Revision date : 2016/07/18  
Version: 1.0

Page: 4/12  
(30658778/SDS\_CPA\_US/EN)

### 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. 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.

---

## 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.

### 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

# Safety Data Sheet

## ZIDUA PRO POWERED BY KIXOR HERBICIDE

Revision date : 2016/07/18

Version: 1.0

Page: 5/12

(30658778/SDS\_CPA\_US/EN)

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.

### 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:	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 temperature:	approx. 0 °C Information applies to the solvent.
boiling temperature:	approx. 100 °C Information applies to the solvent.
Flash point:	> 59 °C No flash point - Measurement made up to the indicated temperature, pilot light extinguishes.
Flammability:	not highly 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.
Autoignition:	approx. 651 °C
Vapour pressure:	approx. 23.4 hPa ( 20 °C) Information applies to the solvent.
Density:	approx. 1.19 g/cm <sup>3</sup> ( 20 °C)
Vapour density:	not applicable

# Safety Data Sheet

## ZIDUA PRO POWERED BY KIXOR HERBICIDE

Revision date : 2016/07/18  
Version: 1.0

Page: 6/12  
(30658778/SDS\_CPA\_US/EN)

---

Thermal decomposition:	No decomposition if stored and handled as prescribed/indicated.
Viscosity, dynamic:	approx. 159 mPa.s ( 20 °C) approx. 156 mPa.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

#### 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 MSDS 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:

No decomposition if stored and handled as prescribed/indicated.

---

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

##### Oral

# Safety Data Sheet

## ZIDUA PRO POWERED BY KIXOR HERBICIDE

Revision date : 2016/07/18  
Version: 1.0

Page: 7/12  
(30658778/SDS\_CPA\_US/EN)

Type of value: LD50  
Species: rat  
Value: > 2,000 mg/kg  
No mortality was observed.

### Inhalation

Type of value: LC50  
Species: rat  
Value: > 6.03 mg/l  
Exposure time: 4 h  
An aerosol was tested.

### Dermal

Type of value: LD50  
Species: rat  
Value: > 5,000 mg/kg

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

### Skin

Species: rabbit  
Result: non-irritant

### Eye

Species: rabbit  
Result: non-irritant

### Sensitization

Assessment of sensitization: There is no evidence of a skin-sensitizing potential. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Buehler test

Species: guinea pig  
Result: Non-sensitizing.

## **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.*

-----

# Safety Data Sheet

## ZIDUA PRO POWERED BY KIXOR HERBICIDE

Revision date : 2016/07/18  
Version: 1.0

Page: 8/12  
(30658778/SDS\_CPA\_US/EN)

### Genetic toxicity

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

### 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.

## **Symptoms of Exposure**

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11., Further important symptoms and effects are so far not known.

---

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

*LC50 (96 h) 340 mg/l, *Oncorhynchus mykiss* (OPP 72-1 (EPA-Guideline), static)*

*LC50 (96 h) 240 mg/l, *Ictalurus punctatus*, syn: *I. robustus**

-----



# Safety Data Sheet

## ZIDUA PRO POWERED BY KIXOR HERBICIDE

Revision date : 2016/07/18  
Version: 1.0

Page: 9/12  
(30658778/SDS\_CPA\_US/EN)

### Aquatic invertebrates

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

### Aquatic plants

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

*EC50 (14 d) 0.0101 mg/l, Lemna gibba*

*No observed effect concentration 0.00438 mg/l, Lemna gibba*

*EC50 (96 h) 71 mg/l, Selenastrum capricornutum*

*No observed effect concentration (96 h) 50 mg/l, Selenastrum capricornutum*  
-----

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

*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: saflufenacil*

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

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

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

*Information on: Pyroxasulfone*

# Safety Data Sheet

## ZIDUA PRO POWERED BY KIXOR HERBICIDE

Revision date : 2016/07/18  
Version: 1.0

Page: 10/12  
(30658778/SDS\_CPA\_US/EN)

---

### 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: saflufenacil*

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

*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: Pyroxasulfone*

*No data available.*

---

### 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

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)

### Sea transport

# Safety Data Sheet

## ZIDUA PRO POWERED BY KIXOR HERBICIDE

Revision date : 2016/07/18  
Version: 1.0

Page: 11/12  
(30658778/SDS\_CPA\_US/EN)

### IMDG

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

### Air transport

#### IATA/ICAO

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

## 15. Regulatory Information

### Federal Regulations

#### Registration status:

Chemical TSCA, US blocked / not listed

Crop Protection TSCA, US released / exempt

### State regulations

#### State RTK

NJ  
PA

#### CAS Number

57-55-6  
57-55-6

#### Chemical name

Propylene glycol  
Propylene glycol

#### CA Prop. 65:

WARNING: THIS PRODUCT CONTAINS A CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

#### CAS Number

50-00-0  
67-56-1  
91-20-3

#### Chemical name

Formaldehyde  
Methanol  
naphthalene

### 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:

HARMFUL IF SWALLOWED.

Wash thoroughly after handling.

# Safety Data Sheet

## ZIDUA PRO POWERED BY KIXOR HERBICIDE

---

Revision date : 2016/07/18  
Version: 1.0

Page: 12/12  
(30658778/SDS\_CPA\_US/EN)

---

### 16. Other Information

**SDS Prepared by:**  
BASF NA Product Regulations  
SDS Prepared on: 2016/07/18

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.

---

END OF DATA SHEET