



We create chemistry

## Safety Data Sheet

### Arsenal Herbicide Applicators Concentrate

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(30497129/SDS CPA US/EN)

#### 1. Identification

##### Product identifier used on the label

### Arsenal Herbicide Applicators Concentrate

##### 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

###### 24 Hour Emergency Response Information

CHEMTREC: 1-800-424-9300

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

##### Other means of identification

Substance number: 57487  
EPA Registration number: 241-299  
Molecular formula: C(13) H(15) N(3) O(3). C(3) H(9) N  
Chemical family: imidazole derivative  
Synonyms: Isopropylamine salt of imazapyr

#### 2. Hazards Identification

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

##### Classification of the product

|                   |          |                                   |
|-------------------|----------|-----------------------------------|
| Acute Tox.        | 4 (oral) | Acute toxicity                    |
| Skin Corr./Irrit. | 1A       | Skin corrosion/irritation         |
| Eye Dam./Irrit.   | 1        | Serious eye damage/eye irritation |

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|                 |   |  |
|-----------------|---|--|
| Aquatic Acute   | 1 | Hazardous to the aquatic environment - acute   |
| Aquatic Chronic | 1 | Hazardous to the aquatic environment - chronic |

### Label elements

Pictogram:



Signal Word:  
Danger

Hazard Statement:

|      |   |
|------|---|
| H302 | Harmful if swallowed.                                 |
| H314 | Causes severe skin burns and eye damage.              |
| H400 | Very toxic to aquatic life.                           |
| H410 | Very toxic to aquatic life with long lasting effects. |

Precautionary Statements (Prevention):

|      |  |
|------|--|
| P280 | Wear protective gloves, protective clothing and eye protection or face protection. |
| P273 | Avoid release to the environment.  |
| P260 | Do not breathe mist or vapour.   |
| P270 | Do not eat, drink or smoke when using this product.                                |
| P264 | Wash contaminated body parts thoroughly after handling.                            |

Precautionary Statements (Response):

|                    |  |
|--------------------|--|
| P305 + P351 + P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P310               | Immediately call a POISON CENTER or physician.   |
| P303 + P361 + P353 | IF ON SKIN (or hair): Remove or Take off immediately all contaminated clothing. Rinse skin with water or shower.                 |
| P304 + P340        | IF INHALED: Remove person to fresh air and keep comfortable for breathing.   |
| P301 + P330 + P331 | IF SWALLOWED: rinse mouth. Do NOT induce vomiting.   |
| P391               | Collect spillage.  |
| P363               | Wash contaminated clothing before reuse.   |

Precautionary Statements (Storage):

|      |                  |
|------|------------------|
| P405 | Store locked up. |
|------|------------------|

Precautionary Statements (Disposal):

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

### 3. Composition / Information on Ingredients

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

Imazapyr technical

CAS Number: 81334-34-1  
Content (W/W): 43.25 %  
Synonym: No data available.

isopropylamine

CAS Number: 75-31-0

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Content (W/W): < 15.0%  
Synonym: Isopropylamine

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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.

##### 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:

Rinse mouth and then drink 200-300 ml of water.

#### Most important symptoms and effects, both acute and delayed

Symptoms: (Further) symptoms and / or effects are not known so far

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

##### Note to physician

Treatment: Symptomatic treatment (decontamination, vital functions).

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### 5. Fire-Fighting Measures

#### Extinguishing media

Suitable extinguishing media:

foam, dry powder, carbon dioxide, water spray

#### 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:

Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

#### Further information:

Evacuate area of all unnecessary personnel. Contain contaminated water/firefighting water. Do not allow to enter drains or waterways.

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### 6. Accidental release measures

#### Personal precautions, protective equipment and emergency procedures

Take appropriate protective measures. Clear area. Shut off source of leak only under safe conditions. Extinguish sources of ignition nearby and downwind. Ensure adequate ventilation. Wear suitable personal protective clothing and equipment.

#### 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. Provide good ventilation of working area (local exhaust ventilation if necessary). Keep away from sources of ignition - No smoking. Keep container tightly sealed. Protect contents from the effects of light. Protect against heat. 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. 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:

The relevant fire protection measures should be noted. Fire extinguishers should be kept handy. Avoid all sources of ignition: heat, sparks, open flame. Sources of ignition should be kept well clear. Avoid extreme heat. Keep away from oxidizable substances. Electrical equipment should conform to national electric code. Ground all transfer equipment properly to prevent electrostatic discharge. Electrostatic discharge may cause ignition.

#### Conditions for safe storage, including any incompatibilities

Segregate from incompatible substances. Segregate from foods and animal feeds. Segregate from textiles and similar materials.

Further information on storage conditions: Keep only in the original container in a cool, dry, well-ventilated place away from ignition sources, heat or flame. Protect containers from physical damage. Protect against contamination. The authority permits and storage regulations must be observed.

### 8. Exposure Controls/Personal Protection

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

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### Components with occupational exposure limits

|                |            |   |
|----------------|------------|---|
| isopropylamine | OSHA Z1:   | PEL 5 ppm 12 mg/m3 ;                              |
|                | ACGIH, US: | TWA value 2 ppm ;                                 |
|                | ACGIH, US: | STEL value 5 ppm ;                                |
|                | ACGIH, US: | Skin Designation ; Danger of cutaneous absorption |

### **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.

#### **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:**

Wear long sleeved work shirt and long work pants in addition to other stated personal protective equipment. Work place should be equipped with a shower and an eye wash. Handle in accordance with good industrial hygiene and safety practice. Personal protective equipment should be decontaminated prior to reuse. Gloves must be inspected regularly and prior to each use. Replace if necessary (e.g. pinhole leaks). Take off immediately all contaminated clothing. Store work clothing separately. Hands and/or face should be washed before breaks and at the end of the shift. No eating, drinking, smoking or tobacco use at the place of work. Keep away from food, drink and animal feeding stuffs.

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## **9. Physical and Chemical Properties**

|                  |  |
|------------------|--|
| Form:            | liquid   |
| Odour:           | strong, ammonia-like   |
| Odour threshold: | Not determined due to potential health hazard by inhalation. |
| Colour:          | green  |

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|   |  |
|---|--|
| pH value:   | approx. 5 - 7<br>( 1 %(m), 20 °C)  |
| Freezing point:                                     | approx. 0 °C<br>( 1,013.3 hPa)   |
| Boiling point:                                      | Information applies to the solvent.<br>approx. 100 °C<br>( 1,013.3 hPa)  |
| Flash point:  | Information applies to the solvent.<br>not applicable Aqueous preparation  |
| 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:                                       | not applicable Information applies to the solvent.   |
| Vapour pressure:                                    | approx. 23.4 hPa<br>( 20 °C)   |
| Density:  | Information applies to the solvent.<br>approx. 1.11 g/cm <sup>3</sup><br>( 20 °C)  |
| Vapour density:                                     | not applicable   |
| Partitioning coefficient n-octanol/water (log Pow): | not applicable   |
| Thermal decomposition:                              | No decomposition if stored and handled as prescribed/indicated.  |
| Viscosity, dynamic:                                 | approx. 46.5 mPa.s<br>( 20 °C)   |
| Solubility in water:                                | readily soluble  |
| Molar mass:   | 320.4 g/mol  |
| 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

Not an oxidizer.

### Chemical stability

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

### Possibility of hazardous reactions

The product is chemically stable.

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Hazardous polymerization will not occur. No hazardous reactions if stored and handled as prescribed/indicated.

### Conditions to avoid

Avoid all sources of ignition: heat, sparks, open flame. Avoid prolonged storage. Avoid electro-static discharge. Avoid contamination. Avoid prolonged exposure to extreme heat. Avoid extreme temperatures.

### Incompatible materials

oxidizing agents, strong alkalis

### Hazardous decomposition products

Decomposition products:

Hazardous decomposition products: No hazardous decomposition products if stored and handled as prescribed/indicated., Prolonged thermal loading can result in products of degradation being given off.

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: Relatively nontoxic after single ingestion. Slightly toxic after short-term skin contact. Relatively nontoxic after short-term inhalation.

#### Oral

Type of value: LD50

Species: rat

Value: > 5,000 mg/kg

#### Inhalation

Type of value: LC50

Species: rat (male/female)

Value: > 5.0 mg/l (OECD Guideline 403)

Exposure time: 4 h

An aerosol was tested.

No mortality was observed.

#### Dermal

Type of value: LD50

Species: rabbit

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.

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

### Irritation / corrosion

Assessment of irritating effects: May cause slight but temporary irritation to the eyes. May cause slight irritation to the skin.

### Skin

Species: rabbit

Result: Slightly irritating.

Method: Primary skin irritation test

### Eye

Species: rabbit

Result: non-irritant

### Sensitization

Assessment of sensitization: Skin sensitizing effects were not observed in animal studies.

### Buehler test

Species: guinea pig

Result: Skin sensitizing effects were not observed in animal studies.

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: isopropylamine*

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

-----

### 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. The results of various animal studies gave no indication of a carcinogenic effect.

### 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:

There is a high probability that the product is not acutely harmful to fish. There is a high probability that the product is not acutely harmful to aquatic invertebrates. Acutely harmful for aquatic plants.

#### Toxicity to fish

LC50 (96 h) > 100 mg/l, Brachydanio rerio

#### Aquatic invertebrates

LC50 (48 h) > 100 mg/l, Daphnia sp.

#### Aquatic plants

EC50 (72 h) > 100 mg/l, Selenastrum capricornutum

#### Assessment of terrestrial toxicity

With high probability not acutely harmful to terrestrial organisms.

#### Other terrestrial non-mammals

##### *Information on: imazapyr*

LC50, Anas platyrhynchos

With high probability not acutely harmful to terrestrial organisms.

LD50 > 100 ug/bee, Apis mellifera

With high probability not acutely harmful to terrestrial organisms.

### Persistence and degradability

#### Assessment biodegradation and elimination (H2O)

##### *Information on: Imazapyr technical*

### Bioaccumulative potential

#### Assessment bioaccumulation potential

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

#### Bioaccumulation potential

##### *Information on: Imazapyr technical*

Bioconcentration factor: < 1.0, Lepomis macrochirus

Does not accumulate in organisms.

### Mobility in soil

#### Assessment transport between environmental compartments

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

*Information on: Imazapyr technical*

*The substance will not evaporate into the atmosphere from the water surface.*

*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:

The ecological data given are those of the active ingredient. Do not release untreated into natural waters.

## 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.

### RCRA:

This product is not regulated by RCRA.

## 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, EHS  |
| Marine pollutant:     | YES   |
| Proper shipping name: | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains IMAZAPYR) |

### Air transport

IATA/ICAO

|                |         |
|----------------|---------|
| Hazard class:  | 9       |
| Packing group: | III     |
| ID number:     | UN 3082 |

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Hazard label: 9, EHSM  
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,  
N.O.S. (contains IMAZAPYR)

### 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

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

NJ

#### CAS Number

75-31-0

#### Chemical name

isopropylamine

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

### BASF Risk Assessment, CA Prop. 65:

Based on an evaluation of the product's composition and the use(s), this product does not require a California Proposition 65 Warning.

#### **NFPA Hazard codes:**

Health: 1 Fire: 1 Reactivity: 0 Special:

### **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.

Avoid contact with the skin, eyes and clothing.

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Avoid inhalation of mists/vapours.

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### 16. Other Information

**SDS Prepared by:**

BASF NA Product Regulations

SDS Prepared on: 2021/11/03

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 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



The Chemical Company

## Safety data sheet

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#### 1. Substance/preparation and company identification

Company  
BASF CORPORATION  
100 Campus Drive  
Florham Park, NJ 07932

24 Hour Emergency Response Information  
CHEMTREC: (800) 424-9300  
BASF HOTLINE: (800) 832-HELP

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|                    |   |
|--------------------|---|
| Substance number:  | 000000063383  |
| Molecular formula: | C(13) H(15) N(3) O(3). C(3) H(9) N                  |
| Molecular weight:  | 320.4 g/mol   |
| Chemical family:   | imidazole derivative                                |
| Synonyms:          | Isopropylamine salt of imazapyr (active ingredient) |

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#### 2. Composition/information on ingredients

---

| <u>CAS Number</u> | <u>Content (W/W)</u> | <u>Chemical name</u>            |
|-------------------|----------------------|---------------------------------|
| 81510-83-0        | 71.3 %               | Proprietary ingredients         |
|                   | 28.7 %               | Isopropylamine salt of imazapyr |

---

#### 3. Hazard identification

##### Emergency overview

CAUTION: KEEP OUT OF REACH OF CHILDREN.  
Avoid contact with the skin, eyes and clothing.  
Avoid inhalation of mists/vapours.

##### Potential health effects

See Product Label for additional precautionary statements.

##### Primary routes of exposure

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

##### Acute toxicity:

Relatively nontoxic after single ingestion. Slightly toxic after short-term skin contact. Relatively nontoxic after short-term inhalation.

##### Irritation:

May cause slight but temporary irritation to the eyes. May cause slight irritation to the skin.

##### Sensitization:

Skin sensitizing effects were not observed in animal studies.

##### Repeated dose toxicity:

No other known chronic effects.

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#### Potential environmental effects

##### **Aquatic toxicity:**

There is a high probability that the product is not acutely harmful to fish.

There is a high probability that the product is not acutely harmful to aquatic invertebrates.

Acutely harmful for aquatic plants.

##### **Terrestrial toxicity:**

With high probability not acutely harmful to terrestrial organisms.

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## 4. First-aid measures

##### **General advice:**

First aid providers should wear personal protective equipment to prevent exposure. Remove contaminated clothing. Move person to fresh air. If person is not breathing, call 911 or ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or physician for treatment advice. Have the product container or label with you when calling a poison control center or doctor or going for treatment.

##### **If inhaled:**

Remove the affected individual into fresh air and keep the person calm. Assist in breathing if necessary.

##### **If on skin:**

Rinse skin immediately with plenty of water for 15 - 20 minutes.

##### **If in eyes:**

Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing.

##### **If swallowed:**

Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to by a poison control center or doctor. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions.

##### **Note to physician**

|            |                             |
|------------|-----------------------------|
| Antidote:  | No known specific antidote. |
| Treatment: | Treat symptomatically.      |

---

## 5. Fire-fighting measures

Flash point: > 210 °F

Self-ignition temperature: 93 °C

##### **Suitable extinguishing media:**

foam, dry extinguishing media, carbon dioxide, water spray

##### **Hazards during fire-fighting:**

carbon monoxide, carbon dioxide, Nitrogen oxide,

If product is heated above decomposition temperature, toxic vapours will be released. The substances/groups of substances mentioned can be released if the product is involved in a fire.



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#### Protective equipment for fire-fighting:

Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

#### Further information:

Evacuate area of all unnecessary personnel. Contain contaminated water/firefighting water. Do not allow to enter drains or waterways.

#### NFPA Hazard codes:

Health : 1      Fire: 1      Reactivity: 0      Special:

---

## 6. Accidental release measures

#### Personal precautions:

Take appropriate protective measures. Clear area. Shut off source of leak only under safe conditions. Extinguish sources of ignition nearby and downwind. Ensure adequate ventilation. Wear suitable personal protective clothing and equipment.

#### Environmental precautions:

Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater. Contain contaminated water/firefighting water.

#### Cleanup:

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

#### Handling

##### General advice:

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 contents from the effects of light. Protect against heat. Protect from air. Handle and open container with care. Do not open until ready to use. Once container is opened, content should be used up 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:**

The relevant fire protection measures should be noted. Fire extinguishers should be kept handy. Avoid all sources of ignition: heat, sparks, open flame. Sources of ignition should be kept well clear. Avoid extreme heat. Keep away from oxidizable substances. Electrical equipment should conform to national electric code. Ground all transfer equipment properly to prevent electrostatic discharge. Electrostatic discharge may cause ignition.

**Storage****General advice:**

Keep only in the original container in a cool, dry, well-ventilated place away from ignition sources, heat or flame. Protect containers from physical damage. Protect against contamination. The authority permits and storage regulations must be observed.

**Storage incompatibility:**

General: Segregate from incompatible substances. Segregate from foods and animal feeds. Segregate from textiles and similar materials.

---

## 8. Exposure controls and personal protection

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

**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.

**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.



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**General safety and hygiene measures:**

Wear long sleeved work shirt and long work pants in addition to other stated personal protective equipment. Work place should be equipped with a shower and an eye wash. Handle in accordance with good industrial hygiene and safety practice. Personal protective equipment should be decontaminated prior to reuse. Gloves must be inspected regularly and prior to each use. Replace if necessary (e.g. pinhole leaks). Take off immediately all contaminated clothing. Store work clothing separately. Hands and/or face should be washed before breaks and at the end of the shift. No eating, drinking, smoking or tobacco use at the place of work. Keep away from food, drink and animal feeding stuffs.

---

## 9. Physical and chemical properties

|                      |                           |
|----------------------|---------------------------|
| Form:                | liquid                    |
| Odour:               | ammonia-like, faint odour |
| Colour:              | blue, clear               |
| pH value:            | 6.6 - 7.2                 |
| Density:             | 1.04 - 1.09 g/ml          |
| Relative density:    | 1.04 - 1.09               |
| Solubility in water: | miscible                  |

---

## 10. Stability and reactivity

**Conditions to avoid:**

Avoid all sources of ignition: heat, sparks, open flame. Avoid extreme temperatures. Avoid prolonged exposure to extreme heat. Avoid contamination. Avoid electro-static discharge. Avoid prolonged storage.

**Substances to avoid:**

oxidizing agent, reducing agents

**Hazardous reactions:**

The product is chemically stable.

**Decomposition products:**

Hazardous decomposition products: nitrogen oxides  
carbon monoxide, carbon dioxide

**Thermal decomposition:**

Possible thermal decomposition products:

carbon monoxide, carbon dioxide, Nitrogen oxide

Stable at ambient temperature. If product is heated above decomposition temperature toxic vapours may be released. If product is heated above decomposition temperature hazardous fumes may be released.

**Corrosion to metals:**

Corrosive effect on: mild steel brass

---

## 11. Toxicological information

**Acute toxicity****Oral:**

LD50/rat/male/female: > 5,000 mg/kg

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**Inhalation:**

LC50/rat: > 4.62 mg/l / 4 h

**Dermal:**

LD50/rabbit/male/female: > 2,000 mg/kg

**Skin irritation:**

rabbit: Mildly irritating. (Primary skin irritation test)

**Eye irritation :**

rabbit: Nonirritating.

**Sensitization:**

Skin sensitization test/guinea pig: Skin sensitizing effects were not observed in animal studies.

**Genetic toxicity:**

Information on: imazapyr

No mutagenic effect was found in various tests with microorganisms and mammals.

**Carcinogenicity:**

Information on: imazapyr

In long-term studies in rats and mice in which the substance was given by feed, a carcinogenic effect was not observed.

**Reproductive toxicity:**

Information on: imazapyr

The results of animal studies gave no indication of a fertility impairing effect.

**Developmental toxicity/teratogenicity:**

Information on: imazapyr

No indications of a developmental toxic / teratogenic effect were seen in animal studies.

---

## 12. Ecological information

Information on: imazapyr

Acute and prolonged toxicity to fish:

Rainbow trout/LC50 (96 h): > 100 mg/l

Information on: imazapyr

Acute toxicity to aquatic invertebrates:

Daphnia magna/EC50 (48 h): > 100 mg/l



The Chemical Company

## Safety data sheet

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*Information on: imazapyr*  
*Toxicity to aquatic plants:*  
*green algae/EC50: 71 mg/l*  
-----

*Information on: imazapyr*  
*Other terrestrial non-mammals:*  
*mallard duck/LC50: > 5,000 ppm*  
*With high probability not acutely harmful to terrestrial organisms.*  
*Honey bee/LD50: > 100 ug/bee*  
*With high probability not acutely harmful to terrestrial organisms.*  
-----

---

### 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

Reference Bill of Lading

---

### 15. Regulatory information

**Federal Regulations**

**Registration status:**

TSCA, US

released / exempt

**OSHA hazard category:**

Chronic target organ effects reported, ACGIH TLV established

**SARA hazard categories (EPCRA 311/312):** Acute

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### 16. Other information

Refer to product label for EPA registration number.



The Chemical Company

## Safety data sheet

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Recommended use: crop protection product

#### Local contact information

Product Stewardship

919 547-2000

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 BASF HEREUNDER ARE GIVEN GRATIS AND BASF ASSUMES 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

# SAFETY DATA SHEET

EMERGENCY CALL: 1-800-424-9300 (CHEMTREC)



## 1. IDENTIFICATION

**PRODUCT NAME:** Alligare Ecomazapyr 2 SL

**DESCRIPTION:** A liquid herbicide.

**EPA Reg. No.:** 81927-22

**COMPANY IDENTIFICATION:**

Alligare, LLC

13 N. 8<sup>th</sup> Street

Opelika, AL 36801

## 2. HAZARD IDENTIFICATION

This product is not hazardous according to OSHA Hazard Communication Standard 29 CFR 1910.1200.

Harmful to aquatic life. (H402)

### HAZARD CLASSIFICATION

**Health Hazard**  
None

**Category**  
-

**Physical Hazards**  
None

**Category**  
-

**Environmental Hazards**

Hazardous to the aquatic environment, short-term

**Category**  
3

### HAZARDS NOT REQUIRING CLASSIFICATION

Spray solutions of Alligare Ecomazapyr 2 SL must be mixed, stored and applied only in stainless steel, fiberglass, plastic, and plastic-lined steel containers. DO NOT mix, store or apply Alligare Ecomazapyr 2 SL or spray solutions of Alligare Ecomazapyr 2 SL in unlined steel (except stainless steel) containers or spray tanks.

### PRECAUTIONARY STATEMENTS

Avoid release into the environment not in accordance with the product label. (P273)

Dispose of contents / containers in accordance with local, State and Federal regulations. Refer to the product label for specific disposal instructions. (P501)

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

| <u>Common Name</u>              | <u>Chemical Name</u>  | <u>CAS #</u> | <u>Composition</u> |
|---------------------------------|---|--------------|--------------------|
| Isopropylamine salt of Imazapyr | (2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-3-pyridinecarboxylic acid) | 81510-83-0   | 27.8%              |

## 4. FIRST AID MEASURES

Have the product container or label with you when calling a poison control center or doctor or going for treatment. For medical emergencies involving this product, call 1-800-424-9300.

## 5. FIREFIGHTING MEASURES

**Flash point:** Not combustible.

**Flammable Limits (LEL):** N/A

**Fire and Explosion Hazards:** Data not available.

**Extinguishing Medium:** Foam, CO<sub>2</sub>, dry chemical, or water spray.

**Fire Fighting Equipment:** Firefighters should be equipped with self-contained positive pressure breathing apparatus and turnout gear.

**Fire Fighting Instructions:** Evacuate area of all unnecessary personnel and fight fire from a safe distance upwind. Contain contaminated water / firefighting water; do not allow to enter drains or waterways. Foam or dry chemical fire extinguishing systems are preferred to prevent environmental damage from excessive water runoff.

**Hazardous Decomposition Products:** When thermally decomposed, may release hazardous and / or toxic fumes.

**NFPA Ratings:** Health – 1 / Flammability – 1 / Reactivity - 0

## 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** Isolate area and keep unnecessary and unprotected personnel from entering. Wear suitable personal protective clothing and equipment as described in Section 8 of this document. Extinguish sources of ignition nearby and downwind and ensure adequate ventilation.

**Environmental Precautions:** Do not discharge into soil / subsoil or into drains / surface water / groundwater. Contain contaminated water / firefighting water.

**Spill Cleanup:** Dike spillage. Pick up with suitable absorbent material. Place into suitable container 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 washwater for approved disposal.

## 7. HANDLING AND STORAGE

**Handling:** Wear appropriate personal protective clothing and equipment (see Section 8 below). Use only in a well-ventilated area. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling. Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

**Storage:** Keep out of reach of children and animals. Store product in original container only, away from other pesticides, fertilizer, food, or feed. Do not store below 10°F.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Engineering Controls:** Facilities storing or utilizing this material should be equipped with an eyewash station and a safety shower.

**Protective Clothing:** Handlers must wear long-sleeved shirt and long pants, chemical-resistant gloves made of any waterproof material (such as polyethylene or polyvinylchloride), and shoes plus socks.

**General:** Follow the manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

|   |                |                                  |               |
|---|----------------|----------------------------------|---------------|
| <b>Appearance:</b>                        | liquid         | <b>pH:</b>                       | 6-7           |
| <b>Odor:</b>                              | not available  | <b>Kinematic viscosity:</b>      | not available |
| <b>Melting/freezing point:</b>            | not available  | <b>Solubility:</b>               | soluble       |
| <b>Boiling point/Boiling range:</b>       | not available  | <b>Partition coefficient:</b>    | not available |
| <b>Flammability:</b>                      | does not flash | <b>Vapor pressure:</b>           | not available |
| <b>Flammability limits (upper/lower):</b> | not available  | <b>Density:</b>                  | 1.06 g/ml     |
| <b>Flash point:</b>                       | not available  | <b>Relative vapor density:</b>   | not available |
| <b>Auto-ignition temperature:</b>         | not available  | <b>Particle characteristics:</b> | not available |
| <b>Decomposition temperature:</b>         | not available  |                                  |               |

## 10. STABILITY AND REACTIVITY

**CONDITIONS TO AVOID:** All sources of ignition (sparks, open flame and excessive heat). Prolonged exposure to extreme temperatures. Electrostatic discharge. Prolonged storage.

**CHEMICAL STABILITY:** Stable under normal use and storage conditions. May decompose if heated.

**HAZARDOUS DECOMPOSITION PRODUCTS:** When thermally decomposed, may release hazardous and / or toxic fumes.

**SUBSTANCES TO AVOID:** Strong alkalis, oxidizing agents.

**HAZARDOUS REACTIONS:** This product is chemically stable and no hazardous reactions should occur if stored and handled as prescribed / indicated.

**HAZARDOUS POLYMERIZATION:** Will not occur.

## 11. TOXICOLOGICAL INFORMATION

**ORAL TOXICITY (rat LD<sub>50</sub>):** > 5,000 mg/kg

**DERMAL TOXICITY (rat LD<sub>50</sub>):** > 5,000 mg/kg

**INHALATION TOXICITY (rat LC<sub>50</sub>):** > 3.5 mg/L (4-hour)

**EYE IRRITATION:** Non-irritating

**SKIN IRRITATION:** Non-irritating

**SKIN SENSITIZATION:** Not a contact sensitizer

**CARCINOGENICITY:**

**EPA:** Not Listed

**ACGIH:** Not Listed

**IARC:** Not Listed

**NTP:** Not Listed

**OSHA:** Not Listed

**MUTAGENIC TOXICITY:** No evidence of mutagenic effects during *in vivo* and *in vitro* assays.

**REPRODUCTIVE TOXICITY:** No evidence in animal studies.

## 12. ECOLOGICAL INFORMATION

The following information is for the active ingredient, Imazapyr:

### AQUATIC TOXICITY

Rainbow Trout (96-hr LC<sub>50</sub>): > 100 mg/L

Bluegill (96-hr LC<sub>50</sub>): > 100 g/L

Diatoms (96-hr EC<sub>50</sub>): 1.3 mg/L

Green Algae (7-day EC<sub>50</sub>): 71 mg/L

### AVIAN TOXICITY

Mallard Duck (Oral LD<sub>50</sub>): > 2,150 mg/kg

Bobwhite Quail (Oral 8-day): > 2,150 mg/kg

## 13. DISPOSAL CONSIDERATIONS

**Do not contaminate water, food or feed by storage or disposal.**

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

**CONTAINER DISPOSAL:** Nonrefillable container. Do not reuse or refill this container. Refer to the product label for specific container handling instructions.

## 14. TRANSPORT INFORMATION

|                         |  |
|-------------------------|--|
| UN Number:              | Not regulated  |
| Proper Shipping Name:   | Not regulated  |
| Transport Hazard Class: | Not applicable   |
| Packing Group:          | Not applicable   |
| Hazard Zone:            | Not applicable   |
| Marine Pollutant:       | No   |
| Hazardous Substance RQ: | None   |
| Labels / Placards:      | US-DOT: Not regulated for domestic ground transport<br>IMDG, IATA: Not regulated for transport under IMDG/IATA |
| Emergency Guide:        | Not applicable   |

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

## 15. REGULATORY INFORMATION

### 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 for workplace labels of non-pesticide chemicals. The following is the hazard information as required on the pesticide label:

### PRECAUTIONARY STATEMENTS

#### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**CAUTION:** Harmful if swallowed. Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco.

See inside label booklet for additional Precautionary Statements.

#### ENVIRONMENTAL HAZARDS

This product is toxic to plants and must be used strictly in accordance with the drift precautions on the label. Drift and run-off may be hazardous to plants in water adjacent to related areas.

Do not apply to water except as specified in this label. Treatment of aquatic weeds may result in oxygen depletion or loss due to decomposition of dead plants. This oxygen loss may cause the suffocation of some aquatic organisms. Do not treat more than one-half the surface area of the water in a single operation and wait at least 10 to 14 days between treatments. Begin treatments along the shore and proceed outward in bands to allow aquatic organisms to move into untreated areas.

Do not contaminate water when disposing of equipment washwaters or rinsate.

This pesticide is toxic to vascular plants and must be used strictly in accordance with the drift precautions on the label.

#### PHYSICAL AND CHEMICAL HAZARDS

Spray solutions of Alligare Ecomazapyr 2 SL must be mixed, stored and applied only in stainless steel, fiberglass, plastic and plastic-lined steel containers.

DO NOT mix, store or apply Alligare Ecomazapyr 2 SL or spray solutions of Alligare Ecomazapyr 2 SL in unlined steel (except stainless steel) containers or spray tanks.



## **15. REGULATORY INFORMATION (CONT.)**

All pesticides are governed under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). The regulatory information presented below is pertinent only when this product is handled outside of the normal use and application as a pesticide. This product is excluded from listing requirements under EPA/TSCA.

### **SARA Title III – Section 302 Extremely Hazardous Substances**

Not listed

### **SARA Title III – Section 311/312 Hazard Categories**

Immediate

### **SARA Title III – Section 312 Threshold Planning Quantity**

N/A

### **SARA Title III – Section 313 Reportable Ingredients**

None

### **CERCLA –**

Not listed

### **CALIFORNIA PROP 65 STATUS –**

This product does not contain any chemicals known to the state of California to cause cancer or reproductive toxicity.

### **CANADA –**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

## **16. OTHER INFORMATION**

THIS INFORMATION IN THIS SDS IS BASED ON DATA AVAILABLE AS OF THE REVISION DATE GIVEN HEREIN, AND BELIEVED TO BE CORRECT. CONTACT ALLIGARE, LLC TO CONFIRM IF YOU HAVE THE MOST CURRENT MSDS. JUDGMENTS AS TO THE SUITABILITY OF THE INFORMATION HEREIN FOR THE INDIVIDUAL'S OWN USE OR PURPOSES IS NECESSARILY THE INDIVIDUAL'S OWN RESPONSIBILITY. ALTHOUGH REASONABLE CARE HAS BEEN TAKEN IN THE PREPARATION OF SUCH INFORMATION, ALLIGARE, LLC EXTENDS NO WARRANTIES, MAKES NO REPRESENTATIONS, AND ASSUMES NO RESPONSIBILITY AS TO THE ACCURACY OR SUITABILITY OF SUCH INFORMATION FOR APPLICATION TO THE INDIVIDUAL'S PURPOSES OR THE CONSEQUENCES OF ITS USE.

This Safety Data Sheet (SDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA APPROVED PRODUCT LABELING (attached to and accompanying the product container). This SDS provides important health, safety, and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use, while the labeling provides that information specifically for product use in the ordinary course.

SDS Version: 3.0

Effective Date: 07/23/18



# Safety data sheet

Page: 1/14

BASF Safety data sheet according to UN GHS 4th rev.

Date / Revised: 21.09.2015

Version: 1.0

Product: **Habitat Herbicide**

(ID no. 30235835/SDS CPA 00/EN)

Date of print 15.09.2022

## 1. Identification

### Product identifier

## Habitat Herbicide

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

Relevant identified uses: crop protection product, herbicide

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

#### Company:

BASF SE

67056 Ludwigshafen

GERMANY

Operating Division Crop Protection

Telephone: +49 621 60-27777

E-mail address: [Produktinformation-Pflanzenschutz@basf.com](mailto:Produktinformation-Pflanzenschutz@basf.com)

### Emergency telephone number

International emergency number:

Telephone: +49 180 2273-112

## 2. Hazards Identification

### Classification of the substance or mixture

#### According to UN GHS criteria

Aquatic Acute 1

Aquatic Chronic 1

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

BASF Safety data sheet according to UN GHS 4th rev.

Date / Revised: 21.09.2015

Version: 1.0

Product: **Habitat Herbicide**

(ID no. 30235835/SDS\_CPA\_00/EN)

Date of print 15.09.2022

**Label elements**Globally Harmonized System (GHS)

Pictogram:



Signal Word:

Warning

Hazard Statement:

H400

Very toxic to aquatic life.

H410

Very toxic to aquatic life with long lasting effects.

Precautionary Statements (Response):

P391

Collect spillage.

Precautionary Statements (Disposal):

P501

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

**Other hazards**According to UN GHS criteria

See section 12 - Results of PBT and vPvB assessment.

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

---

**3. Composition/Information on Ingredients****Substances**

Not applicable

**Mixtures**Chemical nature

crop protection product, herbicide, Soluble concentrate (SL)

Hazardous ingredients (GHS)

BASF Safety data sheet according to UN GHS 4th rev.  
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(ID no. 30235835/SDS\_CPA\_00/EN)

Date of print 15.09.2022

According to UN GHS criteria

imazapyr, 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1 H-imidazol-2-yl]-3-pyridine carboxylate

Content (W/W): 22,9 %

CAS Number: 81334-34-1

INDEX-Number: 613-126-00-1

Eye Dam./Irrit. 2A

Aquatic Acute 1

Aquatic Chronic 1  
H319, H400, H410

M-factor acute: 10

M-factor chronic: 10

2-aminopropane; isopropylamine

Content (W/W): &lt; 10 %

CAS Number: 75-31-0

EC-Number: 200-860-9

INDEX-Number: 612-007-00-1

Flam. Liq. 1

Acute Tox. 3 (Inhalation - vapour)

Acute Tox. 3 (oral)

Acute Tox. 3 (dermal)

Skin Corr./Irrit. 1A

Eye Dam./Irrit. 1

STOT SE 3 (irr. to respiratory syst.)

Aquatic Acute 3

H224, H311, H331, H301, H335, H314, H402

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

#### 4. First-Aid Measures

##### Description of first aid measures

Remove contaminated clothing.

If inhaled:

Keep patient calm, remove to fresh air.

On skin contact:

Wash thoroughly with soap and water.

On contact with eyes:

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

On ingestion:

Rinse mouth and then drink plenty of water.

##### Most important symptoms and effects, both acute and delayed

Symptoms: No significant reaction of the human body to the product known.

---

BASF Safety data sheet according to UN GHS 4th rev.

Date / Revised: 21.09.2015

Version: 1.0

Product: **Habitat Herbicide**

(ID no. 30235835/SDS CPA 00/EN)

Date of print 15.09.2022

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

Treatment: Symptomatic treatment (decontamination, vital functions).

---

**5. Fire-Fighting Measures****Extinguishing media**

Suitable extinguishing media:

water spray, carbon dioxide, foam, dry powder

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

carbon monoxide, Carbon dioxide, nitrogen oxides

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

**Advice for fire-fighters**

Special protective equipment:

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

**Further information:**

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

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

For large amounts: Dike spillage. Pump off product.

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

**Reference to other sections**

Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

---

**7. Handling and Storage****Precautions for safe handling**

BASF Safety data sheet according to UN GHS 4th rev.  
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No special measures necessary if stored and handled correctly. Ensure thorough ventilation of stores and work areas. When using do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift.

Protection against fire and explosion:

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

**Conditions for safe storage, including any incompatibilities**

Segregate from foods and animal feeds.

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

Storage stability:

Storage duration: 24 Months

**Specific end use(s)**

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

---

**8. Exposure Controls/Personal Protection****Control parameters**Components with occupational exposure limits

75-31-0: 2-aminopropane; isopropylamine

**Exposure controls**Personal protective equipment

Respiratory protection:

Respiratory protection not required.

Hand protection:

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

Eye protection:

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

Body protection:

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

General safety and hygiene measures

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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

### Information on basic physical and chemical properties

|                        |   |
|------------------------|---|
| Form:                  | liquid  |
| Colour:                | blue, clear   |
| Odour:                 | odourless   |
| Odour threshold:       |   |
| pH value:              | not applicable, odour not perceivable<br>approx. 4 - 6<br>(1 %(m), 20 °C)   |
| Melting point:         | approx. 0 °C<br>Information applies to the solvent.   |
| Boiling point:         | approx. 100 °C<br>Information applies to the solvent.   |
| Flash point:           | A flash point determination is<br>unnecessary due to the high water<br>content.   |
| Evaporation rate:      |   |
| Flammability:          | not applicable  |
| Lower explosion limit: | not applicable  |
| Upper explosion limit: | As a result of our experience with this<br>product and our knowledge of its<br>composition we do not expect any<br>hazard as long as the product is used<br>appropriately and in accordance with<br>the intended use. |
| Ignition temperature:  | As a result of our experience with this<br>product and our knowledge of its<br>composition we do not expect any<br>hazard as long as the product is used<br>appropriately and in accordance with<br>the intended use. |
| Vapour pressure:       | Based on the water content the<br>product does not ignite.<br>approx. 23,4 hPa<br>(20 °C)<br>Information applies to the solvent.  |
| Density:               | approx. 1,07 g/ml<br>(20 °C)  |



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Relative vapour density (air):

not applicable

Solubility in water: miscible

Partitioning coefficient n-octanol/water (log Kow):

not applicable

Thermal decomposition: No decomposition if stored and handled as prescribed/indicated.

Viscosity, dynamic: approx. 26,3 mPa.s  
(20 °C)Explosion hazard: Based on the chemical structure  
there is no indicating of explosive  
properties.

Fire promoting properties: not fire-propagating

**Other information**

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.

**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**

Substances to avoid:

strong oxidizing agents, strong bases, strong acids

**Hazardous decomposition products**

Hazardous decomposition products:

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

---

**11. Toxicological Information****Information on toxicological effects**Acute toxicity

---

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**Assessment of acute toxicity:**

Virtually nontoxic after a single skin contact. Virtually nontoxic by inhalation. Virtually nontoxic after a single ingestion.

**Experimental/calculated data:**

LD50 rat (oral): &gt; 2.000 mg/kg (OECD Guideline 423)

No mortality was observed.

LC50 rat (by inhalation): &gt; 5,3 mg/l 4 h (OECD Guideline 403)

An aerosol was tested.

LD50 rat (dermal): &gt; 5.000 mg/kg (OECD Guideline 402)

**Irritation****Assessment of irritating effects:**

Not irritating to the skin. Not irritating to the eyes.

**Experimental/calculated data:**

Skin corrosion/irritation rabbit: non-irritant (OECD Guideline 404)

Serious eye damage/irritation rabbit: non-irritant (OECD Guideline 405)

**Respiratory/Skin sensitization****Assessment of sensitization:**

There is no evidence of a skin-sensitizing potential.

**Experimental/calculated data:**

Buehler test guinea pig: Skin sensitizing effects were not observed in animal studies. (OECD Guideline 406)

**Germ cell mutagenicity****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. The results of various animal studies gave no indication of a carcinogenic effect.

**Reproductive toxicity****Assessment of reproduction toxicity:**

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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.

#### Developmental toxicity

##### 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.

#### Specific target organ toxicity (single exposure)

##### Assessment of STOT single:

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

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

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

##### Assessment of repeated dose toxicity:

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

#### Aspiration hazard

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

No aspiration hazard expected.

#### Other relevant toxicity information

Misuse can be harmful to health.

---

## 12. Ecological Information

### 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.

*Information on: imazapyr, 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1 H-imidazol-2-yl]-3-pyridine carboxylate*

#### Toxicity to fish:

LC50 (96 h) > 100 mg/l, *Oncorhynchus mykiss*

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-----  
 Information on: imazapyr, 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1 H-imidazol-2-yl]-3-pyridine carboxylate  
 Aquatic invertebrates:  
 EC50 (48 h) > 100 mg/l, *Daphnia magna*  
 -----

Information on: imazapyr, 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1 H-imidazol-2-yl]-3-pyridine carboxylate  
 Aquatic plants:  
 EC50 (14 d) 0,024 mg/l, *Lemna gibba*  
 -----

No observed effect concentration (14 d) 0,01 mg/l, *Lemna gibba*  
 -----

Information on: imazapyr, 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1 H-imidazol-2-yl]-3-pyridine carboxylate  
 Chronic toxicity to fish:  
 No observed effect concentration (62 d) > 92,4 mg/l, *Oncorhynchus mykiss*  
 -----

Information on: imazapyr, 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1 H-imidazol-2-yl]-3-pyridine carboxylate  
 Chronic toxicity to aquatic invertebrates:  
 No observed effect concentration (21 d) > 97,1 mg/l, *Daphnia magna*  
 -----

### Persistence and degradability

Assessment biodegradation and elimination (H<sub>2</sub>O):

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

Information on: imazapyr, 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1 H-imidazol-2-yl]-3-pyridine carboxylate  
 Assessment biodegradation and elimination (H<sub>2</sub>O):  
 Not readily biodegradable (by OECD criteria).  
 -----

### Bioaccumulative potential

Assessment bioaccumulation potential:

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

Information on: imazapyr, 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1 H-imidazol-2-yl]-3-pyridine carboxylate  
 Assessment bioaccumulation potential:  
 Does not accumulate in organisms.  
 -----

### **Mobility in soil**

Assessment transport between environmental compartments:

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

*Information on: imazapyr, 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1 H-imidazol-2-yl]-3-pyridine carboxylate*

Assessment transport between environmental compartments:

*Volatility: The substance will not evaporate into the atmosphere from the water surface.*

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

### **Results of PBT and vPvB assessment**

The product does not contain a substance fulfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria.

### **Other adverse effects**

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

### **Additional information**

Other ecotoxicological advice:

Do not discharge product into the environment without control.

---

## **13. Disposal Considerations**

### **Waste treatment methods**

Must be disposed of or incinerated in accordance with local regulations.

Contaminated packaging:

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

---

## **14. Transport Information**

### **Land transport**

ADR

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Product: **Habitat Herbicide**

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Date of print 15.09.2022

UN number: UN3082  
 UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains IMAZAPYR)  
 Transport hazard class(es): 9, EHSM  
 Packing group: III  
 Environmental hazards: yes  
 Special precautions for user: Tunnel code: E

**RID**

UN number: UN3082  
 UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains IMAZAPYR)  
 Transport hazard class(es): 9, EHSM  
 Packing group: III  
 Environmental hazards: yes  
 Special precautions for user: None known

**Inland waterway transport****ADN**

UN number: UN3082  
 UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains IMAZAPYR)  
 Transport hazard class(es): 9, EHSM  
 Packing group: III  
 Environmental hazards: yes  
 Special precautions for user: None known  
 Transport in inland waterway vessel: Not evaluated

**Sea transport****IMDG**

UN number: UN 3082  
 UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains IMAZAPYR)  
 Transport hazard class(es): 9, EHSM  
 Packing group: III  
 Environmental hazards: yes  
 Marine pollutant: YES  
 Special precautions for user: None known

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**Air transport****IATA/ICAO**

UN number: UN 3082  
UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,  
N.O.S. (contains IMAZAPYR)  
Transport hazard class(es): 9, EHS  
Packing group: III  
Environmental hazards: yes  
Special precautions for user: None known

**UN number**

See corresponding entries for "UN number" for the respective regulations in the tables above.

**UN proper shipping name**

See corresponding entries for "UN proper shipping name" for the respective regulations in the tables above.

**Transport hazard class(es)**

See corresponding entries for "Transport hazard class(es)" for the respective regulations in the tables above.

**Packing group**

See corresponding entries for "Packing group" for the respective regulations in the tables above.

**Environmental hazards**

See corresponding entries for "Environmental hazards" for the respective regulations in the tables above.

**Special precautions for user**

See corresponding entries for "Special precautions for user" for the respective regulations in the tables above.

**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Regulation: Not evaluated  
Shipment approved: Not evaluated  
Pollution name: Not evaluated  
Pollution category: Not evaluated  
Ship Type: Not evaluated

---

**15. Regulatory Information**

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

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BASF Safety data sheet according to UN GHS 4th rev.

Date / Revised: 21.09.2015

Version: 1.0

Product: **Habitat Herbicide**

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

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## 16. Other Information

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

|                   |   |
|-------------------|---|
| Aquatic Acute     | Hazardous to the aquatic environment - acute          |
| Aquatic Chronic   | Hazardous to the aquatic environment - chronic        |
| Eye Dam./Irrit.   | Serious eye damage/eye irritation                     |
| Flam. Liq.        | Flammable liquids                                     |
| Acute Tox.        | Acute toxicity  |
| Skin Corr./Irrit. | Skin corrosion/irritation                             |
| STOT SE           | Specific target organ toxicity — single exposure      |
| H319              | Causes serious eye irritation.                        |
| H400              | Very toxic to aquatic life.                           |
| H410              | Very toxic to aquatic life with long lasting effects. |
| H224              | Extremely flammable liquid and vapour.                |
| H311              | Toxic in contact with skin.                           |
| H331              | Toxic if inhaled.                                     |
| H301              | Toxic if swallowed.                                   |
| H335              | May cause respiratory irritation.                     |
| H314              | Causes severe skin burns and eye damage.              |
| H402              | Harmful to aquatic life.                              |

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. The data do not describe the product's properties (product specification). Neither should any agreed property nor the suitability of the product for any specific purpose be deduced from the data contained in the safety data sheet. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.

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



# SAFETY DATA SHEET

EMERGENCY CALL: 1-800-424-9300 (CHEMTREC)



## 1. IDENTIFICATION

**PRODUCT NAME:** Alligare Imazapyr 4 SL

**DESCRIPTION:** A liquid herbicide.

**EPA Reg. No.:** 81927-24

**COMPANY IDENTIFICATION:**

Alligare, LLC

13 N. 8<sup>th</sup> Street

Opelika, AL 36801

## 2. HAZARD IDENTIFICATION

### WARNING

May be harmful if swallowed or in contact with skin (H303+H313)

Toxic to aquatic life (H401)

### HAZARD CLASSIFICATION

**Health Hazard**

Acute Toxicity, Oral

Acute Toxicity, Dermal

**Category**

5

5

**Physical Hazards**

None

**Category**

-

**Environmental Hazards**

Hazardous to the aquatic environment, short-term

**Category**

2

### HAZARDS NOT REQUIRING CLASSIFICATION

Spray solutions of Alligare Imazapyr 4 SL must be mixed, stored and applied only in stainless steel, fiberglass, plastic, and plastic-lined steel containers. DO NOT mix, store or apply Alligare Imazapyr 4 SL or spray solutions of Alligare Imazapyr 4 SL in unlined steel (except stainless steel) containers or spray tanks.

### PRECAUTIONARY STATEMENTS

Avoid release to the environment not in accordance with the product label. (P273)

**IF SWALLOWED:** Call a Poison Control Center or doctor if you feel unwell. (P301+P312)

**IF ON SKIN:** Call a Poison Control Center or doctor if you feel unwell. (P302+P312)

Dispose of contents / container in accordance with local regulations. Refer to the product label for specific disposal instructions. (P501)

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

| <u>Common Name</u>              | <u>Chemical Name</u>   | <u>CAS #</u> | <u>Composition</u> |
|---------------------------------|--|--------------|--------------------|
| Isopropylamine salt of Imazapyr | Isopropylamine salt of (2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-3-pyridinecarboxylic acid) | 81510-83-0   | 52.6%              |

## 4. FIRST AID MEASURES

Have the product container or label with you when calling a poison control center or doctor or going for treatment. For medical emergencies involving this product, call 1-800-424-9300.

**IF SWALLOWED:** Call a doctor or poison control center immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison center or doctor. Do not give anything by mouth to an unconscious person.

**IF ON SKIN OR CLOTHING:** Take off contaminated clothing and wash before reuse. Rinse skin immediately with plenty of water. If skin irritation or rash occurs: call a poison control center or doctor for treatment advice.

## 5. FIREFIGHTING MEASURES

**Flash point:** Not combustible.

**Flammable Limits (LFL-UFL):** N/A

**Fire and Explosion Hazards:** Data not available.

**Means of Extinction:** Foam, CO<sub>2</sub>, dry chemical, or water spray.

**Fire Fighting Instructions:** Evacuate area of all unnecessary personnel and fight fire from a safe distance upwind. Contain contaminated water / firefighting water; do not allow to enter drains or waterways. Foam or dry chemical fire extinguishing systems are preferred to prevent environmental damage from excessive water runoff.

**Firefighting Equipment:** Firefighters should be equipped with self-contained positive pressure breathing apparatus and turnout gear.

**Hazardous Combustion Products:** When thermally decomposed, may release hazardous and / or toxic fumes.

**NFPA Ratings:** Health: 1 / Flammability: 1 / Instability: 0

## 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** Isolate area and keep unnecessary and unprotected personnel from entering. Wear suitable personal protective clothing and equipment as described in Section 8 of this document. Extinguish sources of ignition nearby and downwind and ensure adequate ventilation.

**Environmental Precautions:** Do not discharge into soil / subsoil or into drains / surface water / groundwater. Contain contaminated water / firefighting water.

**Spill Cleanup:** Dike spillage. Pick up with suitable absorbent material. Place into suitable container 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 washwater for approved disposal.

## 7. HANDLING AND STORAGE

**Handling:** Wear appropriate personal protective clothing and equipment (see Section 8 below.) Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling. Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

**Storage:** Keep out of reach of children and animals. Do not store below 10°F. Store product in original container only, away from other pesticides, fertilizer, food, or feed.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Engineering Controls:** Workplace should be equipped with a shower and eye-wash station.

**Protective Clothing:** Handlers must wear long-sleeved shirt and long pants, chemical-resistant gloves made of any waterproof material (such as polyethylene or polyvinylchloride), and shoes plus socks.

**General:** Follow the manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

|   |   |                                  |               |
|---|---|----------------------------------|---------------|
| <b>Appearance:</b>                        | transparent blue, slightly viscous liquid | <b>pH:</b>                       | 5.0-5.5       |
| <b>Odor:</b>                              | not available                             | <b>Kinematic viscosity:</b>      | not available |
| <b>Melting/freezing point:</b>            | not available                             | <b>Solubility:</b>               | soluble       |
| <b>Boiling point/Boiling range:</b>       | not available                             | <b>Partition coefficient:</b>    | not available |
| <b>Flammability:</b>                      | not available                             | <b>Vapor pressure:</b>           | not available |
| <b>Flammability limits (upper/lower):</b> | not available                             | <b>Density:</b>                  | 1.2 mg/L      |
| <b>Flash point:</b>                       | not available                             | <b>Relative vapor density:</b>   | not available |
| <b>Auto-ignition temperature:</b>         | not available                             | <b>Particle characteristics:</b> | not available |
| <b>Decomposition temperature:</b>         | not available                             |                                  |               |

## 10. STABILITY AND REACTIVITY

**CONDITIONS TO AVOID:** All sources of ignition (sparks, open flame and excessive heat). Prolonged exposure to extreme temperatures. Electrostatic discharge. Prolonged storage.

**CHEMICAL STABILITY:** Stable under normal use and storage conditions. May decompose if heated.

**HAZARDOUS DECOMPOSITION PRODUCTS:** When thermally decomposed, may release hazardous and / or toxic fumes.

**INCOMPATIBILITY WITH OTHER MATERIALS:** Strong alkalis, oxidizing agents.

**HAZARDOUS REACTIONS:** This product is chemically stable and no hazardous reactions should occur if stored and handled as prescribed / indicated.

**HAZARDOUS POLYMERIZATION:** Will not occur.

## 11. TOXICOLOGICAL INFORMATION

**ORAL TOXICITY (rat LD<sub>50</sub>):** > 2,000 mg/kg

**DERMAL TOXICITY (rat LD<sub>50</sub>):** > 2,000 mg/kg

**INHALATION TOXICITY (rat LC<sub>50</sub>):** > 4.72 mg/L (4-hour)

**EYE IRRITATION:** Minimally irritating

**SKIN IRRITATION:** Non-irritating

**SKIN SENSITIZATION:** Not a contact sensitizer

**CARCINOGENICITY:**

**EPA:** Not Listed

**ACGIH:** Not Listed

**IARC:** Not Listed

**NTP:** Not Listed

**OSHA:** Not Listed

**MUTAGENIC TOXICITY:** No evidence of mutagenic effects during *in vivo* and *in vitro* assays.

**REPRODUCTIVE TOXICITY:** No evidence in animal studies.

## 12. ECOLOGICAL INFORMATION

This product is toxic to plants. Drift and run-off may be hazardous to plants in water adjacent to treated areas. Do not apply to water except as specified on this label.

The following information is for the active ingredient, Imazapyr:

### AQUATIC TOXICITY

Rainbow Trout (96-hr LC<sub>50</sub>): > 100 mg/L

Bluegill (96-hr LC<sub>50</sub>): > 100 g/L

Diatoms (96-hr EC<sub>50</sub>): 1.3 mg/L

Green Algae (7-day EC<sub>50</sub>): 71 mg/L

### AVIAN TOXICITY

Mallard Duck (Oral LD<sub>50</sub>): > 2,150 mg/kg

Bobwhite Quail (Oral 8-day): > 2,150 mg/kg

## 13. DISPOSAL CONSIDERATIONS

**PESTICIDE DISPOSAL:** Do not contaminate water, food, or feed by storage or disposal. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**CONTAINER DISPOSAL:** Nonrefillable container. Do not reuse or refill this container. Refer to the product label for specific container handling instructions.

## 14. TRANSPORT INFORMATION

|                                |  |
|--------------------------------|--|
| <b>UN Number:</b>              | Not regulated  |
| <b>Proper Shipping Name:</b>   | Not regulated  |
| <b>Transport Hazard Class:</b> | Not applicable   |
| <b>Packing Group:</b>          | Not applicable   |
| <b>Hazard Zone:</b>            | Not applicable   |
| <b>Marine Pollutant:</b>       | No   |
| <b>Hazardous Substance RQ:</b> | None   |
| <b>Labels / Placards:</b>      | US-DOT: Not regulated for domestic ground transport<br>IMDG, IATA: Not regulated for transport under IMDG/IATA |
| <b>Emergency Guide:</b>        | Not applicable   |

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

## 15. REGULATORY INFORMATION

### 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 for workplace labels of non-pesticide chemicals. The following is the hazard information as required on the pesticide label:

### PRECAUTIONARY STATEMENTS

#### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**CAUTION:** Harmful if swallowed or absorbed through skin. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing and wash before reuse.

See inside label booklet for additional Precautionary Statements.

#### ENVIRONMENTAL HAZARDS

This product is toxic to plants. Drift and run-off may be hazardous to plants in water adjacent to treated areas. Do not apply to water except as specified on this label. Treatment of aquatic weeds may result in oxygen depletion or loss due to decomposition of dead plants. Do not treat more than one-half the surface area of the water in a single operation and wait at least 10 to 14 days between treatments. Begin treatments along the shore and proceed outward in bands to allow aquatic organisms to move into untreated areas. Do not contaminate water when disposing of equipment washwaters or rinsate. See Directions for Use for additional precautions and requirements.

#### PHYSICAL AND CHEMICAL HAZARDS

Spray solutions of Alligare Imazapyr 4 SL should be mixed, stored and applied only in stainless steel, fiberglass, plastic, and plastic-lined steel containers.

DO NOT mix, store or apply Alligare Imazapyr 4 SL or spray solutions of Alligare Imazapyr 4 SL in unlined steel (except stainless steel) containers or spray tanks.

## **15. REGULATORY INFORMATION (CONT.)**

All pesticides are governed under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). The regulatory information presented below is pertinent only when this product is handled outside of the normal use and application as a pesticide. This product is excluded from listing requirements under EPA/TSCA.

### **SARA Title III – Section 302 Extremely Hazardous Substances**

Not listed

### **SARA Title III – Section 311/312 Hazard Categories**

Immediate

### **SARA Title III – Section 312 Threshold Planning Quantity**

N/A

### **SARA Title III – Section 313 Reportable Ingredients**

None

### **CERCLA –**

Not listed

### **CALIFORNIA PROP 65 STATUS –**

This product does not contain any chemicals known to the state of California to cause cancer or reproductive toxicity.

### **CANADA –**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

## **16. OTHER INFORMATION**

THIS INFORMATION IN THIS SDS IS BASED ON DATA AVAILABLE AS OF THE REVISION DATE GIVEN HEREIN, AND BELIEVED TO BE CORRECT. CONTACT ALLIGARE, LLC TO CONFIRM IF YOU HAVE THE MOST CURRENT MSDS. JUDGMENTS AS TO THE SUITABILITY OF THE INFORMATION HEREIN FOR THE INDIVIDUAL'S OWN USE OR PURPOSES IS NECESSARILY THE INDIVIDUAL'S OWN RESPONSIBILITY. ALTHOUGH REASONABLE CARE HAS BEEN TAKEN IN THE PREPARATION OF SUCH INFORMATION, ALLIGARE, LLC EXTENDS NO WARRANTIES, MAKES NO REPRESENTATIONS, AND ASSUMES NO RESPONSIBILITY AS TO THE ACCURACY OR SUITABILITY OF SUCH INFORMATION FOR APPLICATION TO THE INDIVIDUAL'S PURPOSES OR THE CONSEQUENCES OF ITS USE.

This Safety Data Sheet (SDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA APPROVED PRODUCT LABELING (attached to and accompanying the product container). This SDS provides important health, safety, and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use, while the labeling provides that information specifically for product use in the ordinary course.

SDS Version: 3.0

Effective Date: 07/23/18





For Chemical Emergency, Spill, Leak, Fire, Exposure, or Accident,  
Call CHEMTREC Day or Night: 1-800-424-9300.  
For Medical Emergencies Only, Call 1-877-325-1840.

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Polaris™ AQ Herbicide  
**Synonyms:** Imazapyr: 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-3-pyridinecarboxylic acid  
**EPA Reg. No.:** 241-426-228  
**Company Name:** Nufarm Americas Inc.  
150 Harvester Drive, Suite 200  
Burr Ridge, IL 60527  
**Date of Issue:** June 26, 2006  
**Sections Revised:** Section 11  
**Supersedes:** June 23, 2006

## 2. HAZARDS IDENTIFICATION

### Emergency Overview:

**Appearance and Odor:** Clear blue liquid with faint ammonia-like odor.

**Warning Statements:** Keep out of reach of children. CAUTION. Avoid contact with skin, eyes or clothing. Avoid breathing spray mist.

### Potential Health Effects:

**Likely Routes of Exposure:** Inhalation, eye and skin contact.

**Eye Contact:** May cause slight but temporary irritation to the eyes.

**Skin Contact:** Slightly toxic after short-term skin contact. May cause slight irritation to skin.

**Ingestion:** Relatively nontoxic after single ingestion.

**Inhalation:** Relatively nontoxic after short-term inhalation.

**Medical Conditions Aggravated by Exposure:** None known.

See Section 11: TOXICOLOGICAL INFORMATION for more information.

### Potential Environmental Effects:

Acutely harmful to aquatic plants. Practically non-toxic to fish, aquatic invertebrates and terrestrial organisms.

See Section 12: ECOLOGICAL INFORMATION for more information.

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

| COMPONENT                       | CAS NO.    | % BY WEIGHT |
|---------------------------------|------------|-------------|
| Isopropylamine salt of imazapyr | 81510-83-0 | 28.7        |
| Other Ingredients               |            | 71.3        |

## 4. FIRST AID MEASURES

**If on Skin:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.

**If in Eyes:** Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

**If Inhaled:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

**If Swallowed:** Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

**Note to Physician:** No known specific antidote. Treat symptomatically.

## 5. FIRE FIGHTING MEASURES

**Flash Point:** >210°F (>99°C)

**Autoignition Temperature:** 199°F (93°C)

**Flammability Limits:** Not determined

**Extinguishing Media:** Use foam, water spray, carbon dioxide, or dry extinguishing media.

**Special Fire Fighting Procedures:** Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full fire-fighting turn out gear. Dike area to prevent runoff and contamination of water sources. Dispose of fire control water later.

**Unusual Fire and Explosion Hazards:** If water is used to fight fire, contain runoff, using dikes to prevent contamination of water supplies. Dispose of fire control water later.

**Hazardous Decomposition Materials (Under Fire Conditions):** May produce gases such as oxides of hydrogen, nitrogen and carbon.

### National Fire Protection Association (NFPA) Hazard Rating:

**Rating for this product:** Health: 1      Flammability: 1      Reactivity: 0

Hazards Scale: 0 = Minimal    1 = Slight    2 = Moderate    3 = Serious    4 = Severe

## 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** Wear appropriate protective gear for the situation. See Personal Protection information in Section 8.

**Environmental Precautions:** Prevent material from entering public sewer systems or any waterways. Do not flush to drain. Large spills to soil or similar surfaces may necessitate removal of topsoil. The affected area should be removed and placed in an appropriate container for disposal.

**Methods for Containment:** Dike spill using absorbent or impervious materials such as earth, sand or clay. Collect and contain contaminated absorbent and dike material for disposal.

**Methods for Cleanup and Disposal:** Pump any free liquid into an appropriate closed container. Collect washings for disposal. Decontaminate tools and equipment following cleanup. See Section 13: DISPOSAL CONSIDERATIONS for more information.

**Other Information:** Large spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies.

## 7. HANDLING AND STORAGE

### Handling:

Avoid contact with skin, eyes or clothing. Avoid breathing spray. Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Spray solutions of this product should be mixed, stored, and applied only in stainless steel, fiberglass, plastic, and plastic-lined steel containers. DO NOT mix, store, or apply this product or spray solutions of this product in unlined steel (except stainless steel) containers or spray tanks.



**Storage:**

Do not store below 10°F. Do not contaminate water, food or feed by storage or disposal.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION****Engineering Controls:**

Where engineering controls are indicated by specific use conditions or a potential for excessive exposure, use local exhaust ventilation at the point of generation.

**Personal Protective Equipment:**

**Eye/Face Protection:** To avoid contact with eyes, wear chemical goggles or shielded safety glasses. An emergency eyewash or water supply should be readily accessible to the work area.

**Skin Protection:** To avoid contact with skin, wear long pants, long-sleeved shirt, socks, shoes and chemical-resistant gloves. An emergency shower or water supply should be readily accessible to the work area.

**Respiratory Protection:** Not normally required. If vapors or mists exceed acceptable levels, wear NIOSH approved air-purifying respirator with cartridges/canisters approved for use against pesticides.

**General Hygiene Considerations:** Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material: 1) do not store, use and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored; 2) wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics or using the toilet.

**Exposure Guidelines:**

| Component                       | OSHA |      | ACGIH |      | Unit |
|---------------------------------|------|------|-------|------|------|
|                                 | TWA  | STEL | TWA   | STEL |      |
| Isopropylamine salt of imazapyr | NE   | NE   | NE    | NE   |      |

NE = Not Established

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance and Odor:** Clear blue liquid with faint ammonia-like odor.

**Boiling Point:** Not determined

**Solubility in Water:** Miscible

**Density:** Not determined

**Specific Gravity:** 1.04 – 1.09

**Evaporation Rate:** Not determined

**Vapor Density:** Not determined

**Freezing Point:** Not determined

**Vapor Pressure:** Not determined

**pH:** 6.6 – 7.2

**Viscosity:** Not determined

**Note:** Physical data are typical values, but may vary from sample to sample. A typical value should not be construed as a guaranteed analysis or as a specification.

**10. STABILITY AND REACTIVITY**

**Chemical Stability:** This material is stable under normal handling and storage conditions.

**Conditions to Avoid:** Avoid all sources of ignition: heat, sparks, open flame. Avoid extreme temperatures. Avoid prolonged exposure to extreme heat, contamination, electro-static discharge and prolonged storage.

**Incompatible Materials:** Oxidizing agents and reducing agents. Corrosive to mild steel and brass.

**Hazardous Decomposition Products:** Under fire conditions, may produce gases such as oxides of hydrogen, nitrogen and carbon.

**Hazardous Reactions:** Hazardous polymerization will not occur.

**11. TOXICOLOGICAL INFORMATION****Toxicological Data:**

Data from laboratory studies on this product are summarized below:

**Oral:** Rat LD<sub>50</sub>: >5,000 mg/kg

**Dermal:** Rabbit LD<sub>50</sub>: >2,000 mg/kg

**Inhalation:** Rat 4-hr LC<sub>50</sub>: >4.62 mg/l

**Eye Irritation:** Rabbit: Nonirritating

**Skin Irritation:** Rabbit: Mildly irritating

**Skin Sensitization:** Not a contact sensitizer in guinea pigs following repeated skin exposure.

**Subchronic (Target Organ) Effects:** No adverse effects at approximately 1,700 mg/kg/day (highest dose tested).

**Carcinogenicity / Chronic Health Effects:** Imazapyr did not cause cancer in laboratory animals. EPA has classified imazapyr as a Group E (evidence of non-carcinogenicity for humans) carcinogen.

**Reproductive Toxicity:** The results of animal studies gave no indication of a fertility impairing effect.

**Developmental Toxicity:** No indications of a developmental toxic / teratogenic effect were seen in animal studies.

**Genotoxicity:** No mutagenic effect was found in various tests with microorganisms and mammals.

**Assessment Carcinogenicity:** None listed with ACGIH, IARC, NTP or OSHA.

See Section 2: HAZARDS IDENTIFICATION for more information.

**12. ECOLOGICAL INFORMATION****Ecotoxicity:**

Data on Imazapyr:

|   |             |   |              |
|---|-------------|---|--------------|
| 96-hour LC <sub>50</sub> Bluegill:      | >100 mg/l   | Bobwhite Quail Dietary LC <sub>50</sub> : | >5,000 mg/kg |
| 96-hour LC <sub>50</sub> Rainbow Trout: | >100 mg/l   | Bobwhite Quail Oral LD <sub>50</sub> :    | >2,150 mg/kg |
| 48-hour EC <sub>50</sub> Daphnia:       | >100 mg/l   | Mallard Duck Dietary LC <sub>50</sub> :   | >5,000 mg/kg |
| Honey Bee LD <sub>50</sub> :            | >100 mg/bee | Mallard Duck Oral LD <sub>50</sub> :      | >2,150 mg/kg |

**Environmental Fate:**

Imazapyr is degraded by microbial metabolism and can be relatively persistent in soils. It has an average half-life in soils that ranges from 2 weeks to 5 months. Half-lives tend to be shorter in forest litter and soils. Imazapyr is water-soluble and variably binds to organic materials in the soils. Although the potential to leach is high, leaching is limited under typical field conditions. In water, imazapyr can be rapidly degraded by photolysis with a half-life averaging 2 days. Due to its rapid photodegradation by sunlight, water contamination by imazapyr is generally not of concern.

**13. DISPOSAL CONSIDERATIONS****Waste Disposal Method:**

Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**Container Handling and Disposal:**

Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in an approved sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**14. TRANSPORTATION INFORMATION**

Follow the precautions indicated in Section 7: HANDLING AND STORAGE of this MSDS.

For Department of Transportation (DOT) regulatory information, if required, consult transportation regulations, product shipping papers or call Nufarm's DOT Manager at 708-755-2104, Monday through Friday, 8:00 AM to 5:00 PM Central Time.

**15. REGULATORY INFORMATION****U.S. Federal Regulations:**

**TSCA Inventory:** This product is exempted from TSCA because it is solely for FIFRA regulated use.

**SARA Hazard Notification/Reporting:**

**Hazard Categories Under Criteria of SARA Title III Rules (40 CFR Part 370):** Immediate

**Section 313 Toxic Chemical(s):** None

**Reportable Quantity (RQ) under U.S. CERCLA:** None

**RCRA Waste Code:** None

**State Information:**

Other state regulations may apply. Check individual state requirements.

**California Proposition 65:** Not Listed

**16. OTHER INFORMATION**

This Material Safety Data Sheet (MSDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-ACCEPTED PRODUCT LABELING (attached to and accompanying the product container). This MSDS provides important health, safety and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use, while the labeling provides that information specifically for product use in the ordinary course.

Use, storage and disposal of pesticide products are regulated by the EPA under the authority of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) through the product labeling, and all necessary and appropriate precautionary, use, storage, and disposal information is set forth on that labeling. It is a violation of Federal law to use a pesticide product in any manner not prescribed on the EPA-accepted label.

Although the information and recommendations set forth herein (hereinafter "Information") are presented in good faith and believed to be correct as of the date hereof, Nufarm Americas Inc. makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving same will make their own determination as to its suitability for their purposes prior to use. In no event will Nufarm Americas Inc. be responsible for damages of any nature whatsoever resulting from the use of or reliance upon Information. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH INFORMATION REFERS.

Polaris is a trademark of Nufarm Americas Inc.





For Chemical Emergency, Spill, Leak, Fire, Exposure, or Accident,  
Call CHEMTREC Day or Night: 1-800-424-9300  
For Medical Emergencies Only, Call 1-877-325-1840

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Nufarm Polaris® Herbicide  
**EPA Reg. No.:** 228-534  
**Synonyms:** Imazapyr, Isopropylamine Salt; IPA Salt of Imazapyr; 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-3-pyridine-carboxylic acid, salt with 2-propanamine (1:1)  
**Product Type:** Herbicide  
**Company Name:** Nufarm Americas Inc.  
150 Harvester Drive, Suite 200  
Burr Ridge, IL 60527  
**Date of Issue:** January 14, 2008  
**Sections Revised:** New  
**Supersedes:** New

### 2. HAZARDS IDENTIFICATION

**Emergency Overview:**

**Appearance and Odor:** Blue colored liquid with a faint ammonia-like odor.

**Warning Statements:** Keep out of reach of children. CAUTION. Minimally toxic. Acute toxicity tests show very low potential for immediate risk in handling this product. Follow instructions for personal protective equipment and user safety recommendations.

**Potential Health Effects:**

**Likely Routes of Exposure:** Inhalation, eye and skin contact.

**Eye Contact:** Minimally irritating based on toxicity studies.

**Skin Contact:** Slightly toxic and slightly irritating based on toxicity studies.

**Ingestion:** Slightly toxic based on toxicity studies.

**Inhalation:** Low inhalation toxicity.

**Medical Conditions Aggravated by Exposure:** None known.

See Section 11: TOXICOLOGICAL INFORMATION for more information.

**Potential Environmental Effects:**

Treatment of aquatic weeds can result in oxygen depletion due to decomposition of dead plants. Oxygen loss, if severe, can cause fish suffocation. This product is phytotoxic at extremely low concentrations. Non-target plants may be adversely affected from drift.

See Section 12: ECOLOGICAL INFORMATION for more information.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

| COMPONENT                       | CAS NO.    | % BY WEIGHT |
|---------------------------------|------------|-------------|
| Isopropylamine Salt of Imazapyr | 81510-83-0 | 28.7        |
| Other Ingredients               |            | 71.3        |

**4. FIRST AID MEASURES**

**If in Eyes:** Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

**If on Skin:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.

**If Inhaled:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

**If Swallowed:** Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

**5. FIRE FIGHTING MEASURES**

**Flash Point:** >212°F (>100°C) Pensky-Martens

**Autoignition Temperature:** Not determined    **Flammability Limits:** Not determined

**Extinguishing Media:** Recommended for large fires: foam or water spray. Recommended for small fires: dry chemical or carbon dioxide.

**Special Fire Fighting Procedures:** Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full fire-fighting turn out gear. Dike area to prevent runoff and contamination of water sources. Dispose of fire control water later.

**Unusual Fire and Explosion Hazards:** If water is used to fight fire, contain runoff, using dikes to prevent contamination of water supplies. Dispose of fire control water later.

**Hazardous Decomposition Materials (Under Fire Conditions):** May produce gases such as oxides of carbon, hydrogen and nitrogen.

**National Fire Protection Association (NFPA) Hazard Rating:**

**Rating for this product:** Health: 1    Flammability: 1    Reactivity: 0

Hazards Scale: 0 = Minimal    1 = Slight    2 = Moderate    3 = Serious    4 = Severe

**6. ACCIDENTAL RELEASE MEASURES**

**Personal Precautions:** Wear appropriate protective gear for the situation. See Personal Protection information in Section 8.

**Environmental Precautions:** Prevent material from entering public sewer systems or any waterways. Do not flush to drain. Large spills to soil or similar surfaces may necessitate removal of topsoil. The affected area should be removed and placed in an appropriate container for disposal.

**Methods for Containment:** Dike spill using absorbent or impervious materials such as earth, sand or clay. Collect and contain contaminated absorbent and dike material for disposal.

**Methods for Cleanup and Disposal:** Pump any free liquid into an appropriate closed container. Collect washings for disposal. Decontaminate tools and equipment following cleanup. See Section 13: DISPOSAL CONSIDERATIONS for more information.

**Other Information:** Large spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies.

**7. HANDLING AND STORAGE**

**Handling:**

Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing/Personal Protective Equipment (PPE) immediately if pesticide gets inside. Then wash

thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Spray solutions of this product should be mixed, stored and applied only in stainless steel, fiberglass, plastic and plastic-lined steel containers. Do not mix, store or apply this product or spray solutions of this product in unlined steel (except stainless steel) containers or spray tanks.

**Storage:**

Do not store below 10°F. Do not contaminate water, food or feed by storage or disposal.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION****Engineering Controls:**

Where engineering controls are indicated by specific use conditions or a potential for excessive exposure, use local exhaust ventilation at the point of generation.

**Personal Protective Equipment:**

**Eye/Face Protection:** Not normally required. To avoid contact with eyes, wear chemical goggles or shielded safety glasses. An emergency eyewash or water supply should be readily accessible to the work area.

**Skin Protection:** To avoid contact with skin, wear long pants, long-sleeved shirt, socks, shoes and chemical-resistant gloves made of any waterproof material. An emergency shower or water supply should be readily accessible to the work area.

**Respiratory Protection:** Not normally required. If vapors or mists exceed acceptable levels, wear NIOSH approved air-purifying respirator with cartridges/canisters approved for use against pesticides.

**General Hygiene Considerations:** Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material: 1) do not store, use and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored; 2) wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics or using the toilet.

**Exposure Guidelines:**

| Component                       | OSHA |      | ACGIH |      | Unit |
|---------------------------------|------|------|-------|------|------|
|                                 | TWA  | STEL | TWA   | STEL |      |
| Isopropylamine Salt of Imazapyr | NE   | NE   | NE    | NE   |      |

NE = Not Established

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance and Odor:** Blue colored liquid with a faint ammonia-like odor.

|                          |                    |                             |                  |
|--------------------------|--------------------|-----------------------------|------------------|
| <b>Boiling Point:</b>    | Not determined     | <b>Solubility in Water:</b> | Soluble          |
| <b>Density:</b>          | 8.80 pounds/gallon | <b>Specific Gravity:</b>    | 1.057 @ 20°C     |
| <b>Evaporation Rate:</b> | Not determined     | <b>Vapor Density:</b>       | Not determined   |
| <b>Freezing Point:</b>   | Not determined     | <b>Vapor Pressure:</b>      | Not determined   |
| <b>pH:</b>               | 6.26 (1% solution) | <b>Viscosity:</b>           | 3.766 cst @ 20°C |

**Note:** Physical data are typical values, but may vary from sample to sample. A typical value should not be construed as a guaranteed analysis or as a specification.

**10. STABILITY AND REACTIVITY**

**Chemical Stability:** This material is stable under normal handling and storage conditions.

**Conditions to Avoid:** Excessive heat. Do not store near heat or flame.

**Incompatible Materials:** Oxidizing agents and reducing agents.

**Hazardous Decomposition Products:** Under fire conditions may produce gases such as oxides of carbon, hydrogen and nitrogen.

**Hazardous Reactions:** Hazardous polymerization will not occur.

**11. TOXICOLOGICAL INFORMATION****Toxicological Data:**

Data from laboratory studies on this product are summarized below:

**Oral:** Rat LD<sub>50</sub>: >5,000 mg/kg (female)

**Dermal:** Rat LD<sub>50</sub>: >5,000 mg/kg

**Inhalation:** Rat 4-hr LC<sub>50</sub>: >2.07 mg/L

**Eye Irritation:** Rabbit: Minimally irritating

**Skin Irritation:** Rabbit: Slightly irritating

**Skin Sensitization:** Not a contact sensitizer in guinea pigs following repeated skin exposure.

**Subchronic (Target Organ) Effects:** No adverse effects at approximately 1,700 mg/kg/day (highest dose tested).

**Carcinogenicity / Chronic Health Effects:** Imazapyr did not cause cancer in laboratory animals. EPA has classified imazapyr as a Group E (evidence of non-carcinogenicity for humans) carcinogen.

**Reproductive Toxicity:** The results of animal studies gave no indication of a fertility impairing effect.

**Developmental Toxicity:** No indications of a developmental toxic / teratogenic effect were seen in animal studies.

**Genotoxicity:** No mutagenic effect was found in various tests with microorganisms and mammals.

**Assessment Carcinogenicity:** None listed with ACGIH, IARC, NTP or OSHA.

See Section 2: HAZARDS IDENTIFICATION for more information.

**12. ECOLOGICAL INFORMATION****Ecotoxicity:**

Data on Imazapyr:

96-hour LC<sub>50</sub> Bluegill: >100 mg/l

96-hour LC<sub>50</sub> Rainbow Trout: >100 mg/l

48-hour EC<sub>50</sub> Daphnia: >100 mg/l

Honey Bee LD<sub>50</sub>: >100 mg/bee

Bobwhite Quail 8-day Dietary LC<sub>50</sub>: >5,000 ppm

Bobwhite Quail Oral LD<sub>50</sub>: >2,150 mg/kg

Mallard Duck 8-day Dietary LC<sub>50</sub>: >5,000 ppm

Mallard Duck Oral LD<sub>50</sub>: >2,150 mg/kg

**Environmental Fate:**

Imazapyr is degraded by microbial metabolism and can be relatively persistent in soils. It has an average half-life in soils that ranges from 2 weeks to 5 months. Half-lives tend to be shorter in forest litter and soils. Imazapyr is water-soluble and variably binds to organic materials in the soils. Although the potential to leach is high, leaching is limited under typical field conditions. In water, imazapyr can be rapidly degraded by photolysis with a half-life averaging 2 days. Due to its rapid photodegradation by sunlight, water contamination by imazapyr is generally not of concern.



**13. DISPOSAL CONSIDERATIONS****Waste Disposal Method:**

Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**Container Handling and Disposal:**

Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in an approved sanitary landfill, or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

**14. TRANSPORTATION INFORMATION**

Follow the precautions indicated in Section 7: HANDLING AND STORAGE of this MSDS.

**DOT**

Non Regulated – See 173.132(b)(3)

**IMDG**

Non Regulated - See IMDG 2.6.2.1.3

**IATA**

Non Regulated - See IATA 3.6.1.5.3

**15. REGULATORY INFORMATION****U.S. Federal Regulations:**

**TSCA Inventory:** This product is exempted from TSCA because it is solely for FIFRA regulated use.

**SARA Hazard Notification/Reporting:**

**Hazard Categories Under Criteria of SARA Title III Rules (40 CFR Part 370):**

Immediate

**Section 313 Toxic Chemical(s):**

None

**Reportable Quantity (RQ) under U.S. CERCLA:**

None

**RCRA Waste Code:**

None

**State Information:**

Other state regulations may apply. Check individual state requirements.

**California Proposition 65:** Not listed

**16. OTHER INFORMATION**

This Material Safety Data Sheet (MSDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-ACCEPTED PRODUCT LABELING (attached to and accompanying the product container). This MSDS provides important health, safety and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities

generally other than product use, while the labeling provides that information specifically for product use in the ordinary course.

Use, storage and disposal of pesticide products are regulated by the EPA under the authority of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) through the product labeling, and all necessary and appropriate precautionary, use, storage, and disposal information is set forth on that labeling. It is a violation of Federal law to use a pesticide product in any manner not prescribed on the EPA-accepted label.

Although the information and recommendations set forth herein (hereinafter "Information") are presented in good faith and believed to be correct as of the date hereof, Nufarm Americas Inc. makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving same will make their own determination as to its suitability for their purposes prior to use. In no event will Nufarm Americas Inc. be responsible for damages of any nature whatsoever resulting from the use of or reliance upon Information. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH INFORMATION REFERS.

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SDS

Habitat Herbicide

Conforms to HazCom 2012/United States

# SAFETY DATA SHEET



## Habitat Herbicide

### Section 1. Identification

GHS product identifier : Habitat Herbicide  
Recommended use of the chemical and restriction on use  
Recommended use\* : Herbicide  
EPA Registration No. : 241-426-67690

Supplier's details : SePRO Corporation  
11550 North Meridian Street  
Suite 600  
Carmel, IN 46032 U.S.A.  
Tel: 317-580-8282  
Toll free: 1-800-419-7779  
Fax: 317-580-8290  
Monday - Friday, 8am to 5pm E.S.T.  
[www.sepro.com](http://www.sepro.com)

Emergency telephone : INFOTRAC - 24-hour service 1-800-535-5053  
number (with hours of operation)

#### Other means of identification

Substance number : 63383  
Molecular formula : C(13) H(15) N(3) O(3). C(3) H(9) N  
Chemical family : imidazole derivative  
Synonyms : Isopropylamine salt of imazapyr

The following recommendations for exposure controls and personal protection are intended for the manufacture, formulation and packaging of this product. For applications and/or use, consult the product label. The label directions supersede the text of this Safety Data Sheet for application and/or use.

### Section 2. Hazards identification

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

Label elements The product does not require a hazard warning label in accordance with GHS criteria.



Hazards not otherwise classified

Labeling of special preparations (GHS):

The following percentage of the mixture consists of components(s) with unknown hazards regarding the acute toxicity: 0 - 1 % dermal

The following percentage of the mixture consists of components(s) with unknown hazards regarding the acute toxicity: 0 - 1 % oral

The following percentage of the mixture consists of components(s) with unknown hazards regarding the acute toxicity: 0 - 1 % Inhalation - vapor

The following percentage of the mixture consists of components(s) with unknown hazards regarding the acute toxicity: 0 - 1 % Inhalation - mist

According to Regulation 1994 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Emergency overview

CAUTION:

KEEP OUT OF REACH OF CHILDREN.

Avoid contact with the skin, eyes and clothing.

Avoid inhalation of mists/vapors.

### Section 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>            |
|-------------------|-----------------|---------------------------------|
| 81510-83-0        | 27.8%           | Isopropylamine salt of imazapyr |

According to Regulation 1994 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

| <u>CAS Number</u> | <u>Weight %</u>   | <u>Chemical Name</u>            |
|-------------------|-------------------|---------------------------------|
| 81510-83-0        | ≥ 27.77 - ≤ 27.8% | Isopropylamine salt of imazapyr |
|                   | 72.2%             | Proprietary ingredients         |

### Section 4. First aid measures

Description of first aid measures

|                        |  |
|------------------------|--|
| <b>General advice:</b> | First aid personnel should pay attention to their own safety. If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position). Immediately remove contaminated clothing. |
| <b>If inhaled:</b>     | Keep patient calm, remove to fresh air, seek medical attention. Immediately administer a corticosteroid from a controlled/metered dose inhaler.  |
| <b>If on skin:</b>     | Immediately wash thoroughly with plenty of water, apply sterile dressings, consult a skin specialist.  |
| <b>If in eyes:</b>     | Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.  |
| <b>If swallowed:</b>   | Do not induce vomiting. Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.  |



**Most important symptoms and effects, both acute and delayed**

Symptoms: No significant reaction of the human body to the product 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.

## Section 5. Fire-fighting measures

### Extinguishing media

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

### Special hazards arising from the substance or mixture

Hazards during fire-fighting: Carbon monoxide, carbon dioxide, nitrogen oxide, nitrogen dioxide, hydrocarbons. If product is heated above decomposition temperature, toxic vapors will be released. The substances/groups of substances mentioned can be released if the product is involved in a fire.

### Advice for fire-fighters

Protective equipment for fire-fighting: Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

### Further information:

Evacuate area of all unnecessary personnel. Contain contaminated water/firefighting water. Do not allow to enter drains or waterways.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Take appropriate protective measures. Clear area. Shut off source of leak only under safe conditions. Extinguish sources of ignition nearby and downwind. Ensure adequate ventilation. Wear suitable personal protective clothing and equipment.

### Environmental precautions

Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater. Contain contaminated water/firefighting water.

### 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.

## Section 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 contents from the effects of light. Protect against heat. 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. 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:**

The relevant fire protection measures should be noted. Fire extinguishers should be kept handy. Avoid all sources of ignition: heat, sparks, open flame. Sources of ignition should be kept well clear. Avoid extreme heat. Keep away from oxidizable substances. Electrical equipment should conform to national electric code. Ground all transfer equipment properly to prevent electrostatic discharge. Electrostatic discharge may cause ignition.

**Conditions for safe storage, including any incompatibilities**

Segregate from incompatible substances. Segregate from foods and animal feeds. Segregate from textiles and similar materials.

Further information on storage conditions: Keep only in the original container in a cool, dry, well-ventilated place away from ignition sources, heat or flame. Protect containers from physical damage. Protect against contamination. The authority permits and storage regulations must be observed.

Protect from temperatures below: 0 °C

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

Protect from temperatures above: 40 °C

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

## Section 8. Exposure controls/personal protection

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

**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



## SDS

## Habitat Herbicide

breathing apparatus (SCBA) or a full facepiece pressure demand supplied-air respirator (SAR) with escape provisions.

|   |   |
|---|---|
| <b>Hand protection:</b>                     | Chemical resistant protective gloves, Protective glove selection must be based on the user's assessment of the workplace hazards.   |
| <b>Eye protection:</b>                      | Safety glasses with side-shields. Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.   |
| <b>Body protection:</b>                     | Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.  |
| <b>General safety and hygiene measures:</b> | Wear long sleeved work shirt and long work pants in addition to other stated personal protective equipment. Work place should be equipped with a shower and an eye wash. Handle in accordance with good industrial hygiene and safety practice. Personal protective equipment should be decontaminated prior to reuse. Gloves must be inspected regularly and prior to each use. Replace if necessary (e.g. pinhole leaks). Take off immediately all contaminated clothing. Store work clothing separately. Hands and/or face should be washed before breaks and at the end of the shift. No eating, drinking, smoking or tobacco use at the place of work. Keep away from food, drink and animal feeding stuffs. |

## Section 9. Physical and chemical properties

|  |  |
|--|--|
| Form:  | liquid   |
| Odor:  | ammonia-like, faint odor   |
| Odor threshold:  | not applicable, odor not perceivable   |
| Color:   | blue, clear  |
| pH value:  | 6.6 – 7.2  |
| Freezing point:  | approx. 0 °C (1,013.3 hPa) Information applies to the solvent.   |
| Boiling point:   | approx. 100 °C (1,013.3 hPa) Information applies to the solvent.   |
| Flash point:   | A flash point determination is unnecessary due to the high water content.  |
| 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:  | Based on the water contents the product does not ignite.   |
| Vapor pressure:  | approx. 23.3 hPa (20 °C) Information applies to the solvent.<br>< 100 hPa (50 °C) Information applies to the solvent.  |
| Density:   | 1.04 – 1.09 g/ml   |
| Vapor density:   | not applicable   |
| Partitioning coefficient<br>n-octanol/water (log Pow): | not applicable   |
| Thermal decomposition:                                 | carbon monoxide, carbon dioxide, nitrogen oxide. Stable at ambient temperature. If product is heated above decomposition temperature toxic vapors may be released. If product is heated above decomposition temperature hazardous fumes may be released. |
| Viscosity, dynamic:                                    | approx. 26.3 mPa.s (20 °C)   |
| Solubility in water:                                   | miscible   |
| Molar mass:  | 320.4 g/mol  |
| Evaporation rate:                                      | not applicable   |
| Other information:                                     | If necessary, information on other physical and chemical parameters is indicated in this section.  |

## Section 10. Stability and reactivity

|  |   |
|--|---|
| <b>Reactivity</b>  | No hazardous reactions if stored and handled as prescribed/indicated.<br>Corrosion to metals: Corrosive effect on: mild steel brass<br>Oxidizing properties: Not an oxidizer.   |
| <b>Chemical stability</b>  | The product is stable if stored and handled as prescribed/indicated.  |
| <b>Possibility of hazardous reactions</b>                          | The product is chemically stable.   |
| <b>Conditions to avoid</b>   | Avoid all sources of ignition: heat, sparks, open flame. Avoid prolonged storage. Avoid electro-static discharge. Avoid contamination. Avoid prolonged exposure to extreme heat. Avoid extreme temperatures.  |
| <b>Incompatible materials</b>                                      | oxidizing agents, reducing agents   |
| <b>Hazardous decomposition products</b><br>Decomposition products: |   |
| Hazardous decomposition products:                                  | No hazardous decomposition products if stored and handled as prescribed/indicated.,<br>Prolonged thermal loading can result in products of degradation being given off.   |
| Thermal decomposition:   |   |
| Possible thermal decomposition products:                           | carbon monoxide, carbon dioxide, nitrogen oxide<br><br>Stable at ambient temperature. If product is heated above decomposition temperature toxic vapours may be released. If product is heated above decomposition temperature hazardous fumes may be released. |

## Section 11. Toxicological information

|                                   |   |
|-----------------------------------|---|
| <b>Primary routes of exposure</b> | 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. |
| <b>Acute Toxicity/Effects</b>     |   |
| <u>Acute toxicity</u>             | Assessment of acute toxicity: Relatively nontoxic after single ingestion. Slightly toxic after short-term skin contact. Relatively nontoxic after short-term inhalation.  |
| <u>Oral</u>                       | Type of value: LD50;<br>Species: rat (male/female);<br>Value: > 5,000 mg/kg   |
| <u>Inhalation</u>                 | Type of value: LC50;<br>Species: rat (male/female);<br>Value: > 5.3 mg/l (OECD Guideline 403)<br>Exposure time: 4 h<br>An aerosol was tested.   |





## SDS

## Habitat Herbicide

|  |   |
|--|---|
| <u>Dermal</u>  | Type of value: LD50<br>Species: rabbit (male/female)<br>Value: > 2,000 mg/kg  |
| <u>Irritation / corrosion</u>                        | Assessment of irritating effects: May cause slight but temporary irritation to the eyes. May cause slight irritation to the skin.   |
| <u>Skin</u>  | Species: rabbit<br>Result: Slightly irritating.<br>Method: Primary skin irritation test   |
| <u>Eye</u>   | Species: rabbit<br>Result: non-irritant   |
| <u>Sensitization</u>                                 | Assessment of sensitization: Skin sensitizing effects were not observed in animal studies.  |
| Skin sensitization test                              | Species: guinea pig<br>Result: Skin sensitizing effects were not observed in animal studies.  |
| <b>Chronic Toxicity/Effects</b>                      |   |
| <u>Repeated dose toxicity</u>                        | Assessment of repeated dose toxicity: The product has not been tested. The statement has been derived from the properties of the individual components. No substance-specific organ toxicity was observed after repeated administration to animals.                     |
| <u>Genetic toxicity</u>                              | 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.   |
| <u>Carcinogenicity</u>                               | Assessment of carcinogenicity: The product has not been tested. The statement has been derived from the properties of the individual components. The results of various animal studies gave no indication of a carcinogenic effect.                                     |
| <u>Reproductive toxicity</u>                         | 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.                                |
| <u>Teratogenicity</u>                                | 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. |
| <u>Other Information</u>                             | Misuse can be harmful to health.  |
| <b>Symptoms of Exposure</b>                          | No significant reaction of the human body to the product known.   |
| <u>Medical conditions aggravated by overexposure</u> | Data available do not indicate that there are medical conditions that are generally recognized as being aggravated by exposure to this substance/product. See MSDS section 11 - Toxicological information.  |

## Section 12. Ecological information

### Toxicity

#### Aquatic toxicity

Assessment of aquatic toxicity: There is a high probability that the product is not acutely harmful to fish. There is a high probability that the product is not acutely harmful to aquatic invertebrates. Acutely harmful for aquatic plants.

#### Toxicity to fish

Information on: Imazapyr LC50 (96 h) >100PPM, *Oncorhynchus mykiss* (static)  
LC50 (96 h) >100 ppm, *Lepomis macrochirus* (static)

#### Aquatic invertebrates

Information on: Imazapyr EC50 (24 h) > 100 ppm, *Daphnia magna*

#### Aquatic plants

Information on: Imazapyr EC50 (96 h) >1 ppm, *Selenastrum capricornutum* (static)  
EC50 (14 d) 24, *Lemna gibba*

#### Chronic toxicity to fish

Information on: Imazapyr No observed effect concentration (62 d) > 92.4 mg/l, *Oncorhynchus mykiss*

#### Chronic toxicity to aquatic invertebrates

Information on: Imazapyr No observed effect concentration (21 d) > 97.1 mg/l, *Daphnia magna*

#### Assessment of terrestrial toxicity

With high probability not acutely harmful to terrestrial organisms.

#### Other terrestrial non-mammals

Information on: imazapyr LC50, *Anas platyrhynchos*  
With high probability not acutely harmful to terrestrial organisms.  
LD50 > 100 ug/bee, *Apis mellifera*  
With high probability not acutely harmful to terrestrial organisms.

### 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.

#### Elimination information

Not readily biodegradable (by OECD criteria).

### Bioaccumulative potential

#### Assessment

#### bioaccumulation potential

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

Information on: Imazapyr: Does not accumulate in organisms.

**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: Imazapyr**

*The substance will not evaporate into the atmosphere from the water surface. 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: The ecological data given are those of the active ingredient. Do not release untreated into natural waters.

**Section 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.

**RCRA:** This product is not regulated by RCRA.

**Section 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 SOLVENT NAPHTHA)

**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 SOLVENT NAPHTHA)



## Section 15. Regulatory information

### Federal Regulations

**Registration status:**

Chemical

TSCA, US

blocked / not listed

Crop Protection

TSCA, US

released / exempt

**EPCRA 311/312 (Hazard categories):** Acute; Chronic**CA Prop. 65:**

There are no listed chemicals in this product.

**NFPA Hazard codes:**

Health : 1

Fire: 1

Reactivity: 1

Special:

**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.**

Avoid contact with the skin, eyes and clothing. Avoid inhalation of mists/vapors.

## Section 16. Other information

**SDS Prepared by:**

SePRO Corporation

SDS Prepared on: 06/15/16

**Notice to reader**

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.