

# Safety Data Sheet

## ARSENAL

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### 1. Product and Company Identification

#### Company

BASF Canada Inc.  
100 Milverton Drive  
Mississauga, ON L5R 4H1  
CANADA

#### 24 Hour Emergency Response Information

CANUTEC (reverse charges): (613) 996-6666  
BASF HOTLINE: (800) 454-COPE (2673)

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|                    |                                   |
|--------------------|-----------------------------------|
| Molecular formula: | C(13) H(15) N(3) O(3).C(3) H(9) N |
| Chemical family:   | imidazole derivative              |
| PCP # 23713        |                                   |
| Synonyms:          | Isopropylamine salt of imazapyr   |

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### 2. Hazards Identification

#### Emergency overview

CAUTION:  
POISON.  
Eye irritant.  
KEEP OUT OF REACH OF CHILDREN.  
Avoid inhalation of mists/vapours.  
Avoid contact with the skin, eyes and clothing.  
Wash thoroughly after handling.

State of matter: liquid  
Colour: blue, clear  
Odour: faint odour, ammonia-like

#### Potential health effects

**Acute toxicity:**  
Harmful if swallowed.

**Irritation / corrosion:**  
Irritating to eyes and respiratory system. Prolonged contact with the product can result in skin irritation.

**Chronic toxicity:**

**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.

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

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

**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.

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

**Signs and symptoms of overexposure:**  
No significant reaction of the human body to the product known.

### Potential environmental effects

**Aquatic toxicity:**  
The product has not been tested. The statement has been derived from the properties of the individual components.  
Very toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

**Degradation / environmental fate:**  
The product has not been tested. The statement has been derived from the properties of the individual components.

**Bioaccumulation / bioconcentration:**  
The product has not been tested. The statement has been derived from the properties of the individual components.

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### 3. Composition / Information on Ingredients

Not WHMIS controlled.

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### 4. First-Aid Measures

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

**If on skin:**  
After contact with skin, wash immediately with plenty of water and soap. If irritation develops, seek medical attention.

**If in eyes:**  
Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

**If swallowed:**  
Rinse mouth immediately and then drink plenty of water, induce vomiting, seek medical attention. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions.

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### 5. Fire-Fighting Measures

Flash point:

Non-flammable.

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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.

Flammability: not flammable

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

**Hazards during fire-fighting:**  
carbon monoxide, carbon dioxide, nitrogen oxide, nitrogen dioxide, Hydrocarbons,  
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.

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

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## 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.

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## 7. Handling and Storage

### Handling

**General advice:**  
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. Avoid aerosol formation. Avoid dust formation. Provide means for controlling leaks and spills. Do not return residues to the storage containers. Follow label warnings even after container is emptied. The substance/ product may be handled only by appropriately trained personnel. Avoid all direct contact with the substance/product. Avoid contact with the skin, eyes and clothing. Avoid inhalation of dusts/mists/vapours. Wear suitable personal protective clothing and equipment.

**Protection against fire and explosion:**  
No special precautions necessary. The substance/product is non-combustible. Product is not explosive.

### Storage

**General advice:**

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Keep away from heat. Protect from direct sunlight. Keep in a cool, well-ventilated place.

### 8. Exposure Controls and Personal Protection

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

#### Components with occupational exposure limits

isopropylamine

ACGIH TLV TWA value 5 ppm ; STEL value 10 ppm ;

#### **Advice on system design:**

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

#### Personal protective equipment

##### **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

##### **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.

### 9. Physical and Chemical Properties

|                      |   |  |
|----------------------|---|--|
| Form:                | liquid  |  |
| Odour:               | faint odour, ammonia-like   |  |
| Odour threshold:     | No data available.  |  |
| Colour:              | 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. |
| Density:             | 1.04 - 1.07 g/cm <sup>3</sup>   | ( 20 °C)   |
| Vapour density:      |   | not determined                                     |
| Viscosity, dynamic:  | approx. > 1 mPa.s   | ( 25 °C)   |
| Solubility in water: |   | soluble  |
| Molar mass:          | 320.4 g/mol   |  |
| Other Information:   | If necessary, information on other physical and chemical parameters is indicated in this section. |  |

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### 10. Stability and Reactivity

**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.

**Substances to avoid:**

oxidizing agents, reducing agents

**Thermal decomposition:**

No decomposition if stored and handled as prescribed/indicated.

**Oxidizing properties:**

not fire-propagating

### 11. Toxicological information

**Acute toxicity**

**Oral:**

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

**Inhalation:**

Type of value: LC50  
Species: rat  
Value: > 1.3 mg/l  
Exposure time: 4 h

**Dermal:**

Type of value: LD50  
Species: rabbit  
Value: > 2,148 mg/kg

**Irritation / corrosion**

**Skin:**

Species: rabbit  
Result: Slightly irritating.

Species: rabbit  
Result: Slightly irritating.  
Method: Primary skin irritation test

**Eye:**

Species: rabbit  
Result: Irritant.

Species: rabbit  
Result: Irritating.

**Sensitization:**

modified Buehler test  
Species: guinea pig  
Result: 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.*

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### Reproductive toxicity

*Information on: imazapyr*  
*The results of animal studies gave no indication of a fertility impairing effect.*

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## 12. Ecological Information

### Aquatic toxicity

*Information on: Imazapyr*  
*Assessment of aquatic toxicity:*  
*Acutely harmful for aquatic organisms. May cause long-term adverse effects in the aquatic environment. EU-classification*

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### Fish

*Information on: Imazapyr*  
*Acute:*  
*Oncorhynchus mykiss/LC50 (96 h): > 100 mg/l*

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### Aquatic invertebrates

*Information on: Imazapyr*  
*Acute:*  
*Daphnia magna/LC50 (48 h): > 100 mg/l*

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### Aquatic plants

*Information on: Imazapyr*  
*Toxicity to aquatic plants:*  
*green algae/EC50 (7 d): 71 mg/l*  
*Algae/EC50 (7 d): 11.7 mg/l*  
*swollen duckweed/EC50 (14 d): 0.024 mg/l*

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### Environmental mobility:

*Information on: Imazapyr*  
*Assessment transport between environmental compartments:*  
*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.*

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### Other adverse effects:

Do not discharge product into the environment without control.

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## 13. Disposal considerations

### Waste disposal of substance:

See product label for disposal and recycling instructions.

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### Container disposal:

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

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## 14. Transport Information

### Land transport TDG

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 IMAZAPYR 23%)

### 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 IMAZAPYR 23%)

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## 15. Regulatory Information

### Federal Regulations

#### Registration status:

Chemical DSL, CA released; restriction on quantity / not listed

Crop Protection DSL, CA released / exempt

WHMIS does not apply to this product.

**THIS PRODUCT HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CPR AND THE MSDS CONTAINS ALL THE INFORMATION REQUIRED BY THE CPR.**

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## 16. Other Information

Recommended use: herbicide

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

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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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**SDS Prepared by:**

BASF NA Product Regulations

BASF HOTLINE (800) 454 – COPE (2673)

SDS Prepared on: 2014/07/02

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