

# Safety Data Sheet

## Arsenal Herbicide Applicators Concentrate

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### 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 Agricultural Solutions US LLC  
2 TW Alexander Drive  
Research Triangle Park, NC 27713  
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
Registration number:	EPA Registration number: 241-299
Molecular formula:	C(13) H(15) N(3) O(3). C(3) H(9) N
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**

Skin Corr./Irrit.

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Skin corrosion/irritation

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### Label elements

Pictogram:



Signal Word:  
Warning

Hazard Statement:  
H315 Causes skin irritation.

Precautionary Statements (Prevention):  
P280 Wear protective gloves.  
P264 Wash contaminated body parts thoroughly after handling.

Precautionary Statements (Response):  
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.  
P332 + P313 If skin irritation occurs: Get medical attention.  
P362 + P364 Take off contaminated clothing and wash it before reuse.

### 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  
Content (W/W): < 15.0%  
Synonym: 2-Propanamine; Isopropylamine

### 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

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### 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:

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

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

#### Note to physician

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

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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, Hydrogen chloride, nitrogen oxides, halogenated compounds  
The substances/groups of substances mentioned can be released in case of fire.

### Advice for fire-fighters

Protective equipment for fire-fighting:  
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

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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.

### Components with occupational exposure limits

isopropylamine	OSHA Z1:	PEL 5 ppm 12 mg/m <sup>3</sup> ;
	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.

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### 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
pH value:	approx. 5 - 7 ( 1 %(m), 20 °C)
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:	111.9 °C
Flammability:	not applicable

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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.
Autoignition:	not applicable Information applies to the solvent.
Vapour pressure:	approx. 23.4 hPa ( 20 °C) Information applies to the solvent.
Density:	approx. 1.11 g/cm <sup>3</sup> ( 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 ( 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.  
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

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oxidizing agents, strong alkalies

### 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.

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## 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.

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

#### Irritation / corrosion

Assessment of irritating effects: Not irritating to the skin. Not irritating to the eyes.

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### 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: Non-sensitizing.

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

### Carcinogenicity

Assessment of carcinogenicity: The results of various animal studies gave no indication of a carcinogenic effect. The product has not been tested. The statement has been derived from the properties of the individual components.

### Reproductive toxicity

Assessment of reproduction toxicity: The results of animal studies gave no indication of a fertility impairing effect. The product has not been tested. The statement has been derived from the properties of the individual components.

### Teratogenicity

Assessment of teratogenicity: Animal studies gave no indication of a developmental toxic effect at doses that were not toxic to the parental animals. The product has not been tested. The statement has been derived from the properties of the individual components.

### Other Information

Misuse can be harmful to health.

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## **12. Ecological Information**

### **Toxicity**



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### Aquatic toxicity

#### Assessment of aquatic toxicity:

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

#### Toxicity to fish

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

#### Aquatic invertebrates

EC50 (48 h) > 100 mg/l, *Daphnia* sp.

#### Aquatic plants

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

#### Aquatic plants

#### *Information on: Imazapyr technical*

EC50 (96 h) > 1 ppm, *Selenastrum capricornutum* (static)

EC50 (14 d) 24, *Lemna gibba*

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#### Assessment of terrestrial toxicity

With high probability not acutely harmful to terrestrial organisms.

#### Other terrestrial non-mammals

#### *Information on: Imazapyr technical*

LD50 > 2,150 mg/kg, *Colinus virginianus* (OECD Guideline 205)

LD50 > 2,150 mg/kg, *Anas platyrhynchos* (OECD Guideline 205)

LD50 (48 h) > 100 mg/kg > 100, *Apis mellifera*

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## Persistence and degradability

#### Assessment biodegradation and elimination (H2O)

#### *Information on: Imazapyr technical*

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## 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.

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## 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.*

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### Additional information

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

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## 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.

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## 14. Transport Information

### Land transport

USDOT

Not classified as a dangerous good under transport regulations

### Sea transport

IMDG

Not classified as a dangerous good under transport regulations

### Air transport

IATA/ICAO

Not classified as a dangerous good under transport regulations

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## 15. Regulatory Information

### Federal Regulations

### Registration status:

Crop Protection      TSCA, US    released / exempt

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

<u>CERCLA RQ</u>	<u>CAS Number</u>	<u>Chemical name</u>
100 LBS	75-31-0	isopropylamine

### State regulations

<u>State RTK</u>	<u>CAS Number</u>	<u>Chemical name</u>
PA	75-31-0	isopropylamine
NJ	75-31-0	isopropylamine

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

**WARNING:** This product can expose you to chemicals including TOLUENE, which is known to the State of California to cause birth defects or other reproductive harm. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

### **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.

KEEP OUT OF REACH OF DOMESTIC ANIMALS.

HARMFUL IF SWALLOWED.

Avoid contact with the skin, eyes and clothing.

Avoid inhalation of mists/vapours.

## **16. Other Information**

### **SDS Prepared by:**

BASF Agricultural Solutions US NA Product Regulations

SDS Prepared on: 2023/01/14

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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