SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier
Trade name PERSPECTIVE® HERBICIDE
Product code (UVP) 84119490
SDS Number 102000030334
EPA Registration No. 432-1569

Relevant identified uses of the substance or mixture and uses advised against
Use Herbicide
Restrictions on use See product label for restrictions.

Information on supplier
Supplier Bayer Environmental Science
2 T.W. Alexander Drive
Research Triangle PK, NC 27709
United States
Responsible Department Email: SDSINFO.BCS-NA@bayer.com
Emergency telephone no. Emergency Telephone Number (24hr/ 7 days) 1-800-334-7577
Product Information Telephone Number 1-800-331-2867

SECTION 2: HAZARDS IDENTIFICATION

Classification in accordance with regulation HCS 29CFR §1910.1200
This material is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

Hazards Not Otherwise Classified (HNOC)
No particular hazards known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous Component Name</th>
<th>CAS-No.</th>
<th>Concentration % by weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aminocyclopyrachlor</td>
<td>858956-08-8</td>
<td>39.5</td>
</tr>
<tr>
<td>chlorsulfuron</td>
<td>64902-72-3</td>
<td>15.8</td>
</tr>
</tbody>
</table>
SECTION 4: FIRST AID MEASURES

Description of first aid measures

General advice
When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.

Inhalation
Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a physician or poison control center immediately.

Skin contact
Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water for at least 15 minutes. Call a physician or poison control center immediately.

Eye contact
Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician or poison control center immediately.

Ingestion
Call a physician or poison control center immediately. Rinse out mouth and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended.

Most important symptoms and effects, both acute and delayed

Symptoms
No symptoms known or expected.

Indication of any immediate medical attention and special treatment needed

Treatment
Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended. There is no specific antidote.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable
Water spray, Foam, Dry chemical, Carbon dioxide (CO2)

Unsuitable
None known.

Special hazards arising from the substance or mixture

Dangerous gases are evolved in the event of a fire.

Advice for firefighters

Special protective equipment for firefighters
Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.

Further information
Keep out of smoke. Fight fire from upwind position. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses.

Flash point
Not applicable
Auto-ignition temperature No data available
Lower explosion limit Not applicable
Upper explosion limit Not applicable
Explosivity Not explosive
Dust explosion class No data available

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
Precautions Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.

Methods and materials for containment and cleaning up
Methods for cleaning up Avoid dust formation. Use approved industrial vacuum cleaner for removal. Sweep up or vacuum up spillage and collect in suitable container for disposal. Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations.

Additional advice Do not allow to enter soil, waterways or waste water canal.
Reference to other sections Information regarding safe handling, see section 7. Information regarding personal protective equipment, see section 8. Information regarding waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling
Advice on safe handling Handle and open container in a manner as to prevent spillage. Avoid dust formation. Use only in area provided with appropriate exhaust ventilation.
Advice on protection against fire and explosion Keep away from heat and sources of ignition.
Hygiene measures Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics. Remove Personal Protective Equipment (PPE) immediately after handling this product. Before removing gloves clean them with soap and water. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing.

Conditions for safe storage, including any incompatibilities
Requirements for storage
areas and containers

Store in original container. Store in a cool, dry place and in such a
manner as to prevent cross contamination with other crop protection
products, fertilizers, food, and feed.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

No control parameters known.

Exposure controls

Personal protective equipment

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the
following recommendations would apply.

Respiratory protection

When respirators are required, select NIOSH approved equipment
based on actual or potential airborne concentrations and in
accordance with the appropriate regulatory standards and/or industry
recommendations.

Hand protection

Chemical resistant nitrile rubber gloves

Eye protection

Safety glasses with side-shields

Skin and body protection

Wear long-sleeved shirt and long pants and shoes plus socks.

General protective measures

Follow manufacturer's instructions for cleaning/maintaining PPE. If
no such instructions for washables, use detergent and warm/tepid
water.

Keep and wash PPE separately from other laundry.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

light tan

Physical State

granular

Odor

slight

Odour Threshold

No data available

pH

5.6

Vapor Pressure

No data available

Vapor Density (Air = 1)

No data available

Bulk density

0.68 - 0.78 g/ml (bulk density tapped)

Evaporation rate

Not applicable

Boiling Point

Not applicable

Melting / Freezing Point

Not applicable

Water solubility

dispersible
### Minimum Ignition Energy
No data available

### Decomposition temperature
No data available

### Partition coefficient: n-octanol/water
No data available

### Viscosity
Not applicable

### Flash point
Not applicable

### Auto-ignition temperature
No data available

### Lower explosion limit
Not applicable

### Upper explosion limit
Not applicable

### Explosivity
Not explosive

### Dust explosion class
No data available

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### SECTION 10: STABILITY AND REACTIVITY

**Reactivity**

- **Thermal decomposition**: No data available
- **Chemical stability**: Stable under normal conditions.
- **Possibility of hazardous reactions**: No dangerous reaction known under conditions of normal use.

**Conditions to avoid**: No data available

**Incompatible materials**: No data available

**Hazardous decomposition products**: No decomposition products expected under normal conditions of use.

---

### SECTION 11: TOXICOLOGICAL INFORMATION

**Exposure routes**
Eye contact, Skin contact, Inhalation, Ingestion

**Immediate Effects**

- **Eye**: Moderate eye irritation.
- **Ingestion**: Harmful if swallowed.

**Information on toxicological effects**

- **Acute oral toxicity**: LD50 (female Rat) > 5,000 mg/kg
Acute inhalation toxicity  LC50 (male/female combined Rat) > 5.11 mg/l
Exposure time: 4 h

Acute dermal toxicity  LD50 (male/female combined Rat) > 5,000 mg/kg

Skin irritation  slight irritation (Rabbit)

Eye irritation  Moderate eye irritation. (Rabbit)

Sensitisation  Non-sensitizing. (Mouse)

ACGIH  None.

NTP  None.

IARC  None.

OSHA  None.

Further information
Only acute toxicity studies have been performed on the formulated product.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity to fish  LC50 (Oncorhynchus mykiss (rainbow trout)) > 122 mg/l
Exposure time: 96 h
The value mentioned relates to the active ingredient aminocyclopyrachlor.

LC50 (Lepomis macrochirus (Bluegill sunfish)) > 120 mg/l
Exposure time: 96 h
The value mentioned relates to the active ingredient aminocyclopyrachlor.

LC50 (Oncorhynchus mykiss (rainbow trout)) > 122 mg/l
Exposure time: 96 h
The value mentioned relates to the active ingredient chlorsulfuron.

LC50 (Lepomis macrochirus (Bluegill sunfish)) > 128 mg/l
Exposure time: 96 h
The value mentioned relates to the active ingredient chlorsulfuron.

Toxicity to aquatic invertebrates  EC50 (Daphnia magna (Water flea))  43 mg/l
Exposure time: 96 h
The value mentioned relates to the active ingredient aminocyclopyrachlor.

EC50 (Daphnia magna (Water flea)) > 112 mg/l
Exposure time: 48 h
The value mentioned relates to the active ingredient chlorsulfuron.

**Toxicity to aquatic plants**
EC50 (Raphidocelis subcapitata (freshwater green alga)) > 122 mg/l
Exposure time: 72 h
The value mentioned relates to the active ingredient aminocyclopyrachlor.

EC50 (Anabaena flos-aquae (cyanobacterium)) 7.4 mg/l
Exposure time: 72 h
The value mentioned relates to the active ingredient aminocyclopyrachlor.

**Environmental precautions**
Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark.
Do not allow to get into surface water, drains and ground water.
Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water.
Apply this product as specified on the label.

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**SECTIOIN 13: DISPOSAL CONSIDERATIONS**

**Waste treatment methods**

**Product**
Do not contaminate water, food, or feed by disposal.
Dispose in accordance with all local, state/provincial and federal regulations.
Follow container label instructions for disposal of wastes generated during use in compliance with the product label.

**Contaminated packaging**
Do not re-use empty containers.
Triple rinse containers.
Completely empty container into application equipment, then dispose of empty container in a sanitary landfill, by incineration or by other procedures approved by state/provincial and local authorities.
If burned, stay out of smoke.
Follow advice on product label and/or leaflet.

**RCRA Information**
Characterization and proper disposal of this material as a special or hazardous waste is dependent upon Federal, State and local laws and are the user's responsibility. RCRA classification may apply.

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**SECTION 14: TRANSPORT INFORMATION**

**49CFR**
Not dangerous goods / not hazardous material

**IMDG**
UN number 3077
Class 9
Packaging group: III
Marine pollutant: YES
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (CHLORSULFURON MIXTURE)

IATA
UN number: 3077
Class: 9
Packaging group: III
Environm. Hazardous Mark: YES
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (CHLORSULFURON MIXTURE)

This transportation information is not intended to convey all specific regulatory information relating to this product. It does not address regulatory variations due to package size or special transportation requirements.

SECTION 15: REGULATORY INFORMATION

EPA Registration No.: 432-1569
US Federal Regulations
TSCA list: None.
US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D) None.
SARA Title III - Section 302 - Notification and Information None.
SARA Title III - Section 313 - Toxic Chemical Release Reporting chlorsulfuron 64902-72-3 25,000lbs
US States Regulatory Reporting
CA Prop65: This product does not contain any substances known to the State of California to cause cancer.

This product does not contain any substances known to the State of California to cause reproductive harm.

US State Right-To-Know Ingredients chlorsulfuron 64902-72-3 NJ, RI

Canadian Regulations
Canadian Domestic Substance List: None.

Environmental
CERCLA: None.
Clean Water Section 307 Priority Pollutants
None.

Safe Drinking Water Act Maximum Contaminant Levels
None.

EPA/FIFRA Information:
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. Following is the hazard information required on the pesticide label:

**Signal word:** Caution!

**Hazard statements:**
- Harmful if swallowed.
- Moderate eye irritation.
- Avoid contact with skin, eyes and clothing.

SECTION 16: OTHER INFORMATION

**Abbreviations and acronyms**
- 49CFR: Code of Federal Regulations, Title 49
- ACGIH: US. ACGIH Threshold Limit Values
- CAS-Nr.: Chemical Abstracts Service number
- EINECS: European inventory of existing commercial substances
- ELINCS: European list of notified chemical substances
- IARC: US. IARC Monographs on Occupational Exposures to Chemical Agents
- IATA: International Air Transport Association
- IMDG: International Maritime Dangerous Goods
- N.O.S.: Not otherwise specified
- NTP: US. National Toxicology Program (NTP) Report on Carcinogens
- OECD: Organization for Economic Co-operation and Development
- TWA: Time weighted average
- UN: United Nations
- WHO: World health organisation

**NFPA 704 (National Fire Protection Association):**

<table>
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<tr>
<th>Category</th>
<th>Value</th>
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<tr>
<td>Health</td>
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<td>Flammability</td>
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<tr>
<td>Instability</td>
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<tr>
<td>Physical Hazard</td>
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<tr>
<td>PPE</td>
<td>-</td>
</tr>
</tbody>
</table>

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

**Reason for Revision:** Reviewed and updated for general editorial purposes. The following sections have been revised: Section 2: Hazards Identification. Section 11: Toxicological Information. Section 12. Ecological information.
Revision Date: 02/22/2016

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