

# SAFETY DATA SHEET



## ALION® HERBICIDE

Version 2.0 / CDN  
102000023686

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Revision Date: 06/14/2016  
Print Date: 02/16/2017

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

#### Product identifier

**Trade name** ALION® HERBICIDE

**Product code (UVP)** 79930208

**SDS Number** 102000023686

**PCP Registration No.** 30451

#### 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 CropScience Inc  
#200, 160 Quarry Park Blvd, SE  
Calgary, Alberta T2C 3G3  
Canada

**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** 1-888-283-6847

### SECTION 2: HAZARDS IDENTIFICATION

#### Classified in accordance with Part 2 of the Hazardous Products Regulations

Specific target organ toxicity - repeated exposure: Category 2

#### Labelling in accordance with Part 2 of the Hazardous Products Regulations



**Signal word:** Warning

#### Hazard statements

May cause damage to organs (Nervous system) through prolonged or repeated exposure.

#### Precautionary statements

Do not breathe spray.

Get medical advice/ attention if you feel unwell.

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Dispose of contents/container in accordance with local regulation.

### Hazards Not Otherwise Classified (HNOC)

No physical hazards not otherwise classified.  
No health hazards not otherwise classified.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

| Hazardous Component Name | CAS-No.     | Concentration % by weight |
|--------------------------|-------------|---------------------------|
| Indaziflam               | 950782-86-2 | 19.05                     |

## SECTION 4: FIRST AID MEASURES

### Description of first aid measures

|                       |                                                                                                                                                                                                                                                                                               |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>General advice</b> | When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.                                                                                                                                                            |
| <b>Inhalation</b>     | 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.                                                                                      |
| <b>Skin contact</b>   | 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.                                                                                                               |
| <b>Eye contact</b>    | 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.                                                                       |
| <b>Ingestion</b>      | 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.

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### SECTION 5: FIREFIGHTING MEASURES

#### Extinguishing media

|                                                              |                                                                                                                                                                                        |
|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Suitable</b>                                              | Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.                                                                                                               |
| <b>Unsuitable</b>                                            | High volume water jet                                                                                                                                                                  |
| <b>Special hazards arising from the substance or mixture</b> | In the event of fire the following may be released: Hydrogen cyanide (hydrocyanic acid), Hydrogen fluoride, Carbon monoxide (CO), Nitrogen oxides (NO <sub>x</sub> )                   |
| <b>Advice for firefighters</b>                               |                                                                                                                                                                                        |
| <b>Special protective equipment for firefighters</b>         | Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.                                                                               |
| <b>Further information</b>                                   | 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. |
| <b>Flash point</b>                                           | > 100 °C<br>Not relevant; aqueous solution                                                                                                                                             |
| <b>Auto-ignition temperature</b>                             | No data available                                                                                                                                                                      |
| <b>Lower explosion limit</b>                                 | No data available                                                                                                                                                                      |
| <b>Upper explosion limit</b>                                 | No data available                                                                                                                                                                      |
| <b>Explosivity</b>                                           | Not applicable                                                                                                                                                                         |

### SECTION 6: ACCIDENTAL RELEASE MEASURES

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

|                    |                                                                                                                  |
|--------------------|------------------------------------------------------------------------------------------------------------------|
| <b>Precautions</b> | Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces. |
|--------------------|------------------------------------------------------------------------------------------------------------------|

#### Methods and materials for containment and cleaning up

|                                |                                                                                                                                                                                                                                                                                       |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Methods for cleaning up</b> | Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations. |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                          |                                                                                                                                                   |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Additional advice</b> | Use personal protective equipment. Do not allow to enter soil, waterways or waste water canal. Do not allow product to contact non-target plants. |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|

|                                    |                                                                                                                                                                                     |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Reference to other sections</b> | Information regarding safe handling, see section 7.<br>Information regarding personal protective equipment, see section 8.<br>Information regarding waste disposal, see section 13. |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

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### SECTION 7: HANDLING AND STORAGE

#### Precautions for safe handling

**Advice on safe handling** Handle and open container in a manner as to prevent spillage. Maintain exposure levels below the exposure limit through the use of general and local exhaust ventilation.

**Advice on protection against fire and explosion** No special precautions required.

**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 a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area. Protect from freezing.

### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Control parameters

| Components                              | CAS-No.     | Control parameters                        | Update  | Basis         |
|-----------------------------------------|-------------|-------------------------------------------|---------|---------------|
| Indaziflam                              | 950782-86-2 | 0.14 mg/m <sup>3</sup><br>(TWA)           |         | OES BCS*      |
| 1,2-Propanediol<br>(Aerosol.)           | 57-55-6     | 10 mg/m <sup>3</sup><br>(TWA EV)          | 11 2010 | CAD ON<br>OEL |
| 1,2-Propanediol<br>(Vapor and aerosol.) | 57-55-6     | 155 mg/m <sup>3</sup> /50 ppm<br>(TWA EV) | 06 2015 | CAD ON<br>OEL |

\*OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

#### 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.

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|                                    |                                                                                                                                                                                                 |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Hand protection</b>             | Chemical-resistant gloves (barrier laminate, butyl rubber, nitrile rubber or Viton)                                                                                                             |
| <b>Eye protection</b>              | Safety glasses with side-shields                                                                                                                                                                |
| <b>Skin and body protection</b>    | Wear long-sleeved shirt and long pants and shoes plus socks.                                                                                                                                    |
| <b>General protective measures</b> | Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water.<br>Keep and wash PPE separately from other laundry. |

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## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

|                                               |                                                              |
|-----------------------------------------------|--------------------------------------------------------------|
| <b>Appearance</b>                             | white                                                        |
| <b>Physical State</b>                         | suspension                                                   |
| <b>Odor</b>                                   | characteristic                                               |
| <b>Odour Threshold</b>                        | No data available                                            |
| <b>pH</b>                                     | 7.0 - 8.5 at 1 % (23 °C) (deionized water)                   |
| <b>Vapor Pressure</b>                         | No data available                                            |
| <b>Vapor Density (Air = 1)</b>                | No data available                                            |
| <b>Density</b>                                | ca. 1.05 g/cm <sup>3</sup> at 20 °C                          |
| <b>Evaporation rate</b>                       | No data available                                            |
| <b>Boiling Point</b>                          | No data available                                            |
| <b>Melting / Freezing Point</b>               | No data available                                            |
| <b>Water solubility</b>                       | dispersible                                                  |
| <b>Minimum Ignition Energy</b>                | Not applicable                                               |
| <b>Decomposition temperature</b>              | Stable under normal conditions.                              |
| <b>Partition coefficient: n-octanol/water</b> | No data available                                            |
| <b>Flash point</b>                            | > 100 °C<br>Not relevant; aqueous solution                   |
| <b>Auto-ignition temperature</b>              | No data available                                            |
| <b>Lower explosion limit</b>                  | No data available                                            |
| <b>Upper explosion limit</b>                  | No data available                                            |
| <b>Explosivity</b>                            | Not applicable                                               |
| <b>Other information</b>                      | Further safety related physical-chemical data are not known. |

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### SECTION 10: STABILITY AND REACTIVITY

#### Reactivity

|                                           |                                                                                      |
|-------------------------------------------|--------------------------------------------------------------------------------------|
| <b>Thermal decomposition</b>              | Stable under normal conditions.                                                      |
| <b>Chemical stability</b>                 | Stable under recommended storage conditions.                                         |
| <b>Possibility of hazardous reactions</b> | No hazardous reactions when stored and handled according to prescribed instructions. |
| <b>Conditions to avoid</b>                | Extremes of temperature and direct sunlight.                                         |
| <b>Incompatible materials</b>             | Store only in the original container.                                                |
| <b>Hazardous decomposition products</b>   | No decomposition products expected under normal conditions of use.                   |

### SECTION 11: TOXICOLOGICAL INFORMATION

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

#### Immediate Effects

**Skin** Harmful if absorbed through skin.

**Ingestion** Harmful if swallowed.

**Inhalation** Harmful if inhaled.

#### Information on toxicological effects

**Acute oral toxicity** LD50 (Rat)  $\geq$  5,000 mg/kg

**Acute inhalation toxicity** LC50 (Rabbit) > 3.624 mg/l  
Exposure time: 4 h  
Determined in the form of a respirable aerosol.  
Highest attainable concentration.

**Acute dermal toxicity** LD50 (Rat) > 2,000 mg/kg

**Skin irritation** No skin irritation (Rabbit)

**Eye irritation** No eye irritation (Rabbit)

**Sensitisation** Non-sensitizing. (Guinea pig)  
OECD Test Guideline 406, Buehler test

#### Assessment repeated dose toxicity

Indaziflam caused neurobehavioral effects and/or neuropathological changes in subchronic studies in rats and dogs.

#### Assessment mutagenicity

Indaziflam was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

#### Assessment carcinogenicity

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Indaziflam was not carcinogenic in lifetime feeding studies in rats and mice.

### ACGIH

None.

### NTP

None.

### IARC

None.

### OSHA

None.

### Assessment toxicity to reproduction

Indaziflam was not a primary reproductive toxicant in a two-generation study in rats.

### Assessment developmental toxicity

Indaziflam did not cause developmental toxicity in rats and rabbits.

### Further information

Acute toxicity studies have not been performed on this product as formulated.  
Acute toxicity studies have been bridged from a similar formulation(s).  
The non-acute information pertains to the active ingredient(s).

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## SECTION 12: ECOLOGICAL INFORMATION

|                                          |                                                                                                                                                                                                                                                                                                                              |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Toxicity to aquatic invertebrates</b> | EC50 (Daphnia magna (Water flea)) 149 mg/l<br>Exposure time: 48 h                                                                                                                                                                                                                                                            |
| <b>Toxicity to aquatic plants</b>        | EC50 (Raphidocelis subcapitata (freshwater green alga)) 0.75 mg/l<br>Exposure time: 72 h                                                                                                                                                                                                                                     |
| <b>Biodegradability</b>                  | Indaziflam:<br>Not rapidly biodegradable                                                                                                                                                                                                                                                                                     |
| <b>Koc</b>                               | Indaziflam: Koc: 496                                                                                                                                                                                                                                                                                                         |
| <b>Bioaccumulation</b>                   | Indaziflam: Bioconcentration factor (BCF) 66<br>Does not bioaccumulate.                                                                                                                                                                                                                                                      |
| <b>Mobility in soil</b>                  | Indaziflam: Moderately mobile in soils                                                                                                                                                                                                                                                                                       |
| <b>Additional ecological information</b> | No other effects to be mentioned.                                                                                                                                                                                                                                                                                            |
| <b>Environmental precautions</b>         | Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark.<br>Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water.<br>Drift and runoff from treated areas may be hazardous to aquatic |

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organisms in adjacent sites.  
Apply this product as specified on the label.

### SECTION 13: DISPOSAL CONSIDERATIONS

#### Waste treatment methods

|                               |                                                                                                                                                                                                                                                                                                                                      |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product</b>                | In accordance with current regulations and, if necessary, after consultation with the site operator and/or with the responsible authority, the product may be taken to a waste disposal site or incineration plant.                                                                                                                  |
| <b>Contaminated packaging</b> | Do not re-use empty containers.<br>Triple rinse containers.<br>Puncture container to avoid re-use.<br>Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State/Provincial and local authorities, by burning.<br>If burned, stay out of smoke.<br>Follow advice on product label and/or leaflet. |

### SECTION 14: TRANSPORT INFORMATION

|                          |                                                                                  |
|--------------------------|----------------------------------------------------------------------------------|
| <b>TDG</b>               |                                                                                  |
| UN number                | <b>3082</b>                                                                      |
| Labels                   | 9                                                                                |
| Packaging group          | III                                                                              |
| Marine pollutant         | Marine pollutant                                                                 |
| Proper shipping name     | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,<br>N.O.S.<br>(INDAZIFLAM)           |
| <b>49CFR</b>             | Not dangerous goods / not hazardous material                                     |
| <b>IMDG</b>              |                                                                                  |
| UN number                | <b>3082</b>                                                                      |
| Class                    | 9                                                                                |
| Packaging group          | III                                                                              |
| Marine pollutant         | YES                                                                              |
| Proper shipping name     | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,<br>N.O.S.<br>(INDAZIFLAM SOLUTION)  |
| <b>IATA</b>              |                                                                                  |
| UN number                | <b>3082</b>                                                                      |
| Class                    | 9                                                                                |
| Packaging group          | III                                                                              |
| Environm. Hazardous Mark | YES                                                                              |
| Proper shipping name     | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,<br>N.O.S.<br>(INDAZIFLAM SOLUTION ) |

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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.

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### SECTION 15: REGULATORY INFORMATION

**PCP Registration No.** 30451

**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**

None.

**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**

None.

**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.

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### SECTION 16: OTHER INFORMATION

**Abbreviations and acronyms**

49CFR Code of Federal Regulations, Title 49

ACGIH US. ACGIH Threshold Limit Values

ATE Acute toxicity estimate

CAS-Nr. Chemical Abstracts Service number

CERCLA Comprehensive Environmental Response, Compensation, and Liability Act

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|        |                                                             |
|--------|-------------------------------------------------------------|
| EINECS | European inventory of existing commercial substances        |
| ELINCS | European list of notified chemical substances               |
| IARC   | International Agency for Research on Cancer                 |
| 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      |
| TDG    | Transportation of Dangerous Goods                           |
| TWA    | Time weighted average                                       |
| UN     | United Nations                                              |
| WHO    | World health organisation                                   |

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

Health - 1      Flammability - 1      Instability - 0      Others - none

### HMIS (Hazardous Materials Identification System, based on the Third Edition Ratings Guide)

Health - 1      Flammability - 1      Physical Hazard - 0      PPE -

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

**Reason for Revision:** Revised according to the current Canadian WHMIS standard (WHMIS 2015). The following sections have been revised: Section 11: Toxicological Information.

Prepared by the HSE Department of Bayer CropScience Inc. (306)-721-0310.

**Revision Date:** 06/14/2016

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