

SAFETY DATA SHEET



ESPLANADE® F HERBICIDE

Version 3.0 / USA
102000023686

1/11
Revision Date: 05/04/2020
Print Date: 05/05/2020

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

Product identifier

| | |
|----------------------|------------------------|
| Trade name | ESPLANADE® F HERBICIDE |
| Product code (UVP) | 79930208 |
| SDS Number | 102000023686 |
| EPA Registration No. | 432-1517 |

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 A division of Bayer CropScience LP 500 Centregreen Way, Suite 400 Cary, NC 27513 USA |
| 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

Specific target organ toxicity - repeated exposure: Category 2
Specific target organ toxicity - single exposure: Category 2

Labelling in accordance with regulation HCS 29CFR §1910.1200



Signal word: Warning

Hazard statements

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

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exposure if swallowed.
May cause damage to organs (Nervous system) if swallowed.

Precautionary statements

Do not breathe spray.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
IF exposed or concerned: Call a POISON CENTER/ doctor/ physician.
Store locked up.
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

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

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| Treatment | Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended. |
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SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

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| Suitable | Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. |
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| Unsuitable | High volume water jet |
|-------------------|-----------------------|

| | |
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| Special hazards arising from the substance or mixture | In the event of fire the following may be released: Hydrogen cyanide (hydrocyanic acid), Hydrogen fluoride, Carbon monoxide (CO), Nitrogen oxides (NOx) |
|--|---|

Advice for firefighters

| | |
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| Special protective equipment for firefighters | Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing. |
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| 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. |
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| Flash point | > 100 °C No flash point - Determination conducted up to the boiling point. |
|--------------------|---|

| | |
|----------------------------------|---|
| Auto-ignition temperature | > 500 °C / > 932 °F The product is not self-ignitable. |
|----------------------------------|---|

| | |
|------------------------------|-------------------|
| Lower explosion limit | No data available |
|------------------------------|-------------------|

| | |
|------------------------------|-------------------|
| Upper explosion limit | No data available |
|------------------------------|-------------------|

| | |
|--------------------|---|
| Explosivity | Not explosive 92/69/EEC, A.14 / OECD 113 |
|--------------------|---|

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

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| Precautions | Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces. |
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Methods and materials for containment and cleaning up

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| Methods for cleaning up | 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. |
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| Additional advice | Use personal protective equipment. If the product is accidentally spilled, do not allow to enter soil, waterways or waste water canal. Do not allow product to contact non-target plants. |
| 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. Use only in area provided with appropriate exhaust ventilation.

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 | 0.56 mg/m ³ (TWA) | | OES BCS* |

*OES BCS: Internal Bayer AG, Crop Science Division "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.

Hand protection Chemical resistant nitrile rubber gloves

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| 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 | white |
| Physical State | suspension |
| Odor | characteristic |
| Odour Threshold | No data available |
| pH | 9.0 - 10.0 (100 %) (23 °C) |
| Viscosity, kinematic | 113 mm ² /s _{20 °C} Shear rate of 20/sec 98 mm ² /s _{40 °C} Shear rate of 20/sec 57 mm ² /s _{20 °C} Shear rate of 100/sec 40 mm ² /s _{40 °C} Shear rate of 100/sec |
| Vapor Pressure | No data available |
| Vapor Density (Air = 1) | No data available |
| Specific Gravity | 1.051 (20 °C) 1.044 (40 °C) |
| Density | ca. 1.05 g/cm ³ (20 °C) |
| Evaporation rate | No data available |
| Boiling Point | No data available |
| Melting / Freezing Point | No data available |
| Water solubility | dispersible |
| Minimum Ignition Energy | Not applicable |
| Decomposition temperature | Stable under normal conditions. |
| Self-accelerating decomposition temperature (SADT) | No data available |
| Partition coefficient: n-octanol/water | No data available |
| Viscosity | 30 - 75 mPa.s (20 °C) Velocity gradient 100 /s 80 - 180 mPa.s (20 °C) Velocity gradient 20 /s |
| Flammability | No data available |

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| Oxidizing properties | No oxidizing properties |
| Flash point | > 100 °C No flash point - Determination conducted up to the boiling point. |
| Auto-ignition temperature | > 500 °C / > 932 °F The product is not self-ignitable. |
| Lower explosion limit | No data available |
| Upper explosion limit | No data available |
| Explosivity | Not explosive 92/69/EEC, A.14 / OECD 113 |
| Particle size | No data available |
| Other information | Further safety related physical-chemical data are not known. |

SECTION 10: STABILITY AND REACTIVITY

Reactivity

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| Thermal decomposition | Stable under normal conditions. |
| Chemical stability | Stable under recommended storage conditions. |
| Possibility of hazardous reactions | No hazardous reactions when stored and handled according to prescribed instructions. |
| Conditions to avoid | Extremes of temperature and direct sunlight. |
| Incompatible materials | No incompatible materials known. |
| Hazardous decomposition products | No decomposition products expected under normal conditions of use. |

SECTION 11: TOXICOLOGICAL INFORMATION

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| Exposure routes | Eye contact, Inhalation, Skin Absorption, Ingestion |
| Immediate Effects | |
| Eye | May cause slight irritation. |
| Skin | Harmful if absorbed through skin. |
| Ingestion | Harmful if swallowed. |
| Inhalation | Harmful if inhaled. |
| Information on toxicological effects | |
| Acute oral toxicity | LD50 (Rat) > 2,000 mg/kg Test conducted with a similar formulation. |

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| Acute inhalation toxicity | LC50 (Rat) \geq 3.624 mg/l Exposure time: 4 h Determined in the form of a respirable aerosol. Highest attainable concentration. Test conducted with a similar formulation. |
| Acute dermal toxicity | LD50 (Rat) > 2,000 mg/kg Test conducted with a similar formulation. |
| Skin corrosion/irritation | No skin irritation (Rabbit) Test conducted with a similar formulation. |
| Serious eye damage/eye irritation | Slight irritant effect - does not require labelling. (Rabbit) Test conducted with a similar formulation. |
| Respiratory or skin sensitisation | Skin: Non-sensitizing. (Guinea pig) Test conducted with a similar formulation. |

Assessment STOT Specific target organ toxicity – single exposure

Indaziflam: May cause damage to organs in nervous system following oral route.

Assessment STOT Specific target organ toxicity – repeated exposure

Indaziflam caused neurobehavioral effects and/or neuropathological changes in subchronic studies in rats and dogs. Indaziflam: May cause damage to organs (Nervous system) through prolonged or repeated exposure.

Assessment mutagenicity

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

Assessment carcinogenicity

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.

Aspiration hazard

Based on available data, the classification criteria are not met.

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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).

SECTION 12: ECOLOGICAL INFORMATION

| | |
|--|--|
| Toxicity to fish | LC50 (Lepomis macrochirus (Bluegill sunfish)) 0.85 mg/l Exposure time: 96 h Test conducted with a similar formulation. |
| Toxicity to aquatic invertebrates | EC50 (Daphnia magna (Water flea)) 149 mg/l Exposure time: 48 h |
| Toxicity to aquatic plants | EC50 (Skeletonema costatum) 0.603 mg/l Growth rate; Exposure time: 96 h NOEC (Skeletonema costatum) 0.125 mg/l Growth rate; Exposure time: 96 h EC50 (Raphidocelis subcapitata (freshwater green alga)) 0.750 mg/l Growth rate; Exposure time: 72 h EC50 (Lemna gibba (gibbous duckweed)) 0.000712 mg/l Growth rate; Exposure time: 7 d |
| Biodegradability | Indaziflam: Not rapidly biodegradable |
| Koc | Indaziflam: Koc: 496 |
| Bioaccumulation | Indaziflam: Bioconcentration factor (BCF) 66 Does not bioaccumulate. |
| Mobility in soil | Indaziflam: Moderately mobile in soils |
| Additional ecological information | No other effects to be mentioned. |
| 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 contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent sites. Apply this product as specified on the label. |

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

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| Product | Dispose in accordance with all local, state/provincial and federal regulations. |
| Contaminated packaging | Do not re-use empty containers. Triple rinse containers. Puncture container to avoid re-use. Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State/Provincial and local authorities, by burning. 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. |

SECTION 14: TRANSPORT INFORMATION

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

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.

Freight Classification: INSECTICIDES OR FUNGICIDES, N.O.I., OTHER THAN POISON

SECTION 15: REGULATORY INFORMATION

EPA Registration No. 432-1517

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US Federal Regulations

TSCA list

Water 7732-18-5
1,2-Propanediol 57-55-6

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)

No export notification needs to be made.

SARA Title III - Section 302 - Notification and Information

Not applicable.

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

1,2-Propanediol 57-55-6 MN, RI

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, inhaled or absorbed through the skin.

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 |
| 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 |

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| 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: The following sections have been revised: Section 2: Hazards Identification. Section 11: Toxicological Information. Section 12. Ecological information. Section 15: Regulatory information. Reviewed and updated for general editorial purposes.

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