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

Product identifier
Trade name ESPLANADE® 200 SC
Product code (UVP) 79930208
SDS Number 102000023686
EPA Registration No. 432-1516

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 Environmental Science U.S. LLC. (formerly known as AgraQuest, INC.)
5000 Centregreen Way, Suite 400
Cary, NC 27513
USA

Emergency telephone no.
Emergency Telephone Number (24hr / 7 days) 1-800-424-9300
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
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

<table>
<thead>
<tr>
<th>Hazardous Component Name</th>
<th>CAS-No.</th>
<th>Concentration % by weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indaziflam</td>
<td>950782-86-2</td>
<td>19.05</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.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable  
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable  
High volume water jet

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  
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  
> 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

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  
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.
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

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Control parameters</th>
<th>Update</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indaziflam</td>
<td>950782-86-2</td>
<td>0.56 mg/m^3 (TWA)</td>
<td></td>
<td>OES BCS*</td>
</tr>
</tbody>
</table>

*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
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 mm²/s at 20 °C (Shear rate of 20/sec)
- 98 mm²/s at 40 °C (Shear rate of 20/sec)
- 57 mm²/s at 20 °C (Shear rate of 100/sec)
- 40 mm²/s at 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/cm³ (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
SAFETY DATA SHEET

ESPLANADE® 200 SC
Version 3.0 / USA
102000023686

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
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

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.
Acute inhalation toxicity  
LC50 (Rat) >= 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.

Asspiration hazard  
Based on available data, the classification criteria are not met.
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
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: COMPOUNDS, TREE OR WEED KILLING, N.O.I. other than poison, HAVING A DENSITY OF 20 LBS OR GREATER PER CUBIC FOOT

SECTION 15: REGULATORY INFORMATION
**SAFETY DATA SHEET**

**ESPLANADE® 200 SC**

Version 3.0 / USA

102000023686

Revision Date: 05/04/2020

Print Date: 06/17/2022

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**EPA Registration No.** 432-1516

**US Federal Regulations**

**TSCA list**

<table>
<thead>
<tr>
<th>Substance</th>
<th>CAS Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
</tr>
<tr>
<td>1,2-Propanediol</td>
<td>57-55-6</td>
</tr>
</tbody>
</table>

**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.

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**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**

<table>
<thead>
<tr>
<th>Substance</th>
<th>CAS Number</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,2-Propanediol</td>
<td>57-55-6</td>
<td>MN, RI</td>
</tr>
</tbody>
</table>

None.

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**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**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>49CFR</td>
<td>Code of Federal Regulations, Title 49</td>
</tr>
<tr>
<td>ACGIH</td>
<td>US. ACGIH Threshold Limit Values</td>
</tr>
<tr>
<td>ATE</td>
<td>Acute toxicity estimate</td>
</tr>
<tr>
<td>CAS-Nr.</td>
<td>Chemical Abstracts Service number</td>
</tr>
<tr>
<td>CERCLA</td>
<td>Comprehensive Environmental Response, Compensation, and Liability Act</td>
</tr>
<tr>
<td>EINECS</td>
<td>European inventory of existing commercial substances</td>
</tr>
<tr>
<td>ELINCS</td>
<td>European list of notified chemical substances</td>
</tr>
<tr>
<td>IARC</td>
<td>International Agency for Research on Cancer</td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods</td>
</tr>
</tbody>
</table>
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

- 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.

**Revision Date:** 05/04/2020

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