

# SAFETY DATA SHEET



## ESPLANADE® EZ

Version 4.0 / USA  
102000025082

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Revision Date: 05/11/2022  
Print Date: 05/12/2022

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

#### Product identifier

**Trade name** ESPLANADE® EZ  
**Product code (UVP)** 80197926  
**SDS Number** 102000025082  
**EPA Registration No.** 432-1528

#### 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  
5000 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

Acute toxicity(Inhalation): Category 4  
Skin irritation: Category 2

#### Labelling in accordance with regulation HCS 29CFR §1910.1200



**Signal word:** Warning

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### Hazard statements

Harmful if inhaled.  
Causes skin irritation.

### Precautionary statements

Avoid breathing mist/ spray.  
Use only outdoors or in a well-ventilated area.  
Wear protective gloves.  
Wash thoroughly after handling.  
IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
Call a POISON CENTER/doctor/physician if you feel unwell.  
IF ON SKIN: Wash with plenty of water/ soap.  
Specific treatment (see supplemental first aid instructions on this label).  
If skin irritation occurs: Get medical advice/ attention.  
Take off contaminated clothing and wash before reuse.

### Hazards Not Otherwise Classified (HNOC)

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

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component Name	CAS-No.	Concentration % by weight
Indaziflam	950782-86-2	0.089
Diquat dibromide	85-00-7	0.89
Isopropylamine salt of glyphosate	38641-94-0	20.46
Poly(oxy-1,2-ethanediyl),.alpha.-phosphono-.omega.-butoxy, isopropylamine salt	431040-31-2	1.5

## 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>	Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. 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.

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**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** To date no symptoms are known.

### 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.

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## SECTION 5: FIREFIGHTING MEASURES

### Extinguishing media

**Suitable** Water spray, Foam, Carbon dioxide (CO<sub>2</sub>), Dry chemical

**Unsuitable** High volume water jet

**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. Whenever possible, contain fire-fighting water by diking area with sand or earth.

### Specific hazards from the substance or mixture which can increase the fire

**Flash point** >93.3 °C / 199.94 °F

**Auto-ignition temperature** No data available

**Lower explosion limit** No data available

**Upper explosion limit** No data available

**Explosivity** No data available

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### 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** Use only in area provided with appropriate exhaust ventilation. Handle and open container in a manner as to prevent spillage.

**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. 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. Keep away from direct sunlight.

**Advice on common storage** Keep away from food, drink and animal feedingstuffs.

### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Control parameters

Components	CAS-No.	Control parameters	Update	Basis
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Indaziflam	950782-86-2	0.56 mg/m <sup>3</sup> (TWA)		OES BCS*
Diquat dibromide (Total dust.)	85-00-7	0.5 mg/m <sup>3</sup> (TWA PEL)	09 2006	US CA OEL
Diquat dibromide	85-00-7	0.5 mg/m <sup>3</sup> (TWA)	06 2008	TN OEL
Diquat dibromide	85-00-7	0.5 mg/m <sup>3</sup> (REL)	2005	NIOSH
Diquat dibromide (Respirable fraction.)	85-00-7	0.1 mg/m <sup>3</sup> (TWA)	03 2014	ACGIH
Diquat dibromide (Inhalable fraction.)	85-00-7	0.5 mg/m <sup>3</sup> (TWA)	03 2014	ACGIH

\*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 gloves (barrier laminate, butyl rubber, nitrile rubber or Viton)

#### 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

### Information on basic physical and chemical properties

Form	Liquid
Colour	white to pink
Odour	slight, fruity
Odour Threshold	No data available
pH	4.0 - 6.0 (100 %) (23 °C)

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<b>Melting point/range</b>	No data available
<b>Boiling Point</b>	No data available
<b>Flash point</b>	> 93.3 °C / 199.94 °F
<b>Flammability</b>	No data available
<b>Auto-ignition temperature</b>	No data available
<b>Minimum ignition energy</b>	No data available
<b>Self-accelerating decomposition temperature (SADT)</b>	No data available
<b>Upper explosion limit</b>	No data available
<b>Lower explosion limit</b>	No data available
<b>Vapour pressure</b>	No data available
<b>Evaporation rate</b>	No data available
<b>Relative vapour density</b>	No data available
<b>Relative density</b>	No data available
<b>Density</b>	1.10 g/cm <sup>3</sup> (20 °C)
<b>Water solubility</b>	soluble
<b>Partition coefficient: n-octanol/water</b>	Indaziflam: log Pow: 3.7 (20 °C) (pH 7) Diquat dibromide: log Pow: -4.6 Glyphosate: log Pow: -3.2
<b>Viscosity, dynamic</b>	300 - 800 cps (25 °C)
<b>Viscosity, kinematic</b>	No data available
<b>Oxidizing properties</b>	No data available
<b>Explosivity</b>	No data available

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## SECTION 10: STABILITY AND REACTIVITY

<b>Reactivity</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.

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<b>Conditions to avoid</b>	Extremes of temperature and direct sunlight. freezing
<b>Incompatible materials</b>	No incompatible materials known.
<b>Hazardous decomposition products</b>	No decomposition products expected under normal conditions of use.

### SECTION 11: TOXICOLOGICAL INFORMATION

<b>Exposure routes</b>	Ingestion, Skin Absorption, Eye contact
<b>Immediate Effects</b>	
<b>Eye</b>	May cause temporary eye irritation.
<b>Skin</b>	Causes skin irritation. May be harmful in contact with skin.
<b>Ingestion</b>	May be harmful if swallowed.
<b>Inhalation</b>	May be harmful if inhaled.
<b>Information on toxicological effects</b>	
<b>Acute oral toxicity</b>	LD50 (Rat) > 5,000 mg/kg
<b>Acute inhalation toxicity</b>	LC50 (Rat) > 2.04 mg/l Exposure time: 4 h Determined in the form of liquid aerosol. highest concentration tested
<b>Acute dermal toxicity</b>	LD50 (Rat) > 2,000 mg/kg
<b>Skin corrosion/irritation</b>	Moderate skin irritation. (Rabbit)
<b>Serious eye damage/eye irritation</b>	Mild eye irritation. (Rabbit)
<b>Respiratory or skin sensitisation</b>	Skin: Non-sensitizing. (Guinea pig) OECD Test Guideline 406, Buehler test

#### Assessment STOT Specific target organ toxicity – single exposure

Indaziflam: May cause damage to organs in nervous system following oral route.  
Diquat dibromide: May cause respiratory irritation.  
Glyphosate: Based on available data, the classification criteria are not met.

#### 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.  
Diquat dibromide caused specific target organ toxicity in experimental animal studies in the following organ(s): Eyes, Kidney. Diquat dibromide caused Cataract in animal studies.  
Glyphosate did not cause specific target organ toxicity in experimental animal studies.

#### Assessment mutagenicity

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Indaziflam was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.  
Diquat dibromide was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.  
Glyphosate 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.  
Diquat dibromide was not carcinogenic in lifetime feeding studies in rats and mice.  
Glyphosate was not carcinogenic in lifetime feeding studies in rats and mice.  
Important comment to IARC Listing: Our expert opinion is that classification as a carcinogen is not warranted.

### ACGIH

Diquat dibromide 85-00-7 Group A4

### NTP

None.

### IARC

Isopropylamine salt of glyphosate 38641-94-0 Overall evaluation: 2A

### Assessment toxicity to reproduction

Indaziflam was not a primary reproductive toxicant in a two-generation study in rats.  
Diquat dibromide did not cause reproductive toxicity in a two-generation study in rats.  
Glyphosate did not cause reproductive toxicity in a two-generation study in rats.

### Assessment developmental toxicity

Indaziflam did not cause developmental toxicity in rats and rabbits.  
Diquat dibromide caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Diquat dibromide are related to maternal toxicity.  
Glyphosate did not cause developmental toxicity in rats and rabbits.

### Aspiration hazard

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

### Further information

Only acute toxicity studies have been performed on the formulated product.  
The non-acute information pertains to the active ingredient(s).

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## SECTION 12: ECOLOGICAL INFORMATION

### Toxicity to fish

LC50 (Oncorhynchus mykiss (rainbow trout)) 0.572 mg/l  
Exposure time: 96 h  
The value mentioned relates to the active ingredient indaziflam.  
LC50 (Lepomis macrochirus (Bluegill sunfish)) 13.9 ppm  
The value mentioned relates to the active ingredient diquat dibromide.  
LC50 (Oncorhynchus mykiss (rainbow trout)) 14.8 ppm  
The value mentioned relates to the active ingredient diquat dibromide.

### Toxicity to aquatic

EC50 (Daphnia magna (Water flea)) > 9.88 mg/l



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<b>invertebrates</b>	Exposure time: 48 h The value mentioned relates to the active ingredient indaziflam.  EC50 (Daphnia (water flea)) 0.77 - 1.19 ppm The value mentioned relates to the active ingredient diquat dibromide.
<b>Toxicity to aquatic plants</b>	IC50 (Raphidocelis subcapitata (freshwater green alga)) 0.134 mg/l Growth rate; Exposure time: 96 h The value mentioned relates to the active ingredient indaziflam.
<b>Biodegradability</b>	Indaziflam: Not rapidly biodegradable Diquat dibromide: Not rapidly biodegradable Glyphosate: Not rapidly biodegradable
<b>Koc</b>	Indaziflam: Koc: 496 Diquat dibromide: Koc: 2184750 Glyphosate: Koc: 6920
<b>Bioaccumulation</b>	Indaziflam: Bioconcentration factor (BCF) 66 Does not bioaccumulate. Diquat dibromide: Bioconcentration factor (BCF) 1 Does not bioaccumulate. Glyphosate: Does not bioaccumulate.
<b>Mobility in soil</b>	Indaziflam: Moderately mobile in soils Diquat dibromide: Immobile in soil Glyphosate: Immobile in soil
<b>Results of PBT and vPvB assessment</b>	
<b>PBT and vPvB assessment</b>	Indaziflam: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB). Diquat dibromide: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB). Glyphosate: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).
<b>Environmental precautions</b>	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. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent sites. Drift or runoff from treated areas may adversely affect non-target plants. Do not apply when weather conditions favor runoff or drift. Apply this product as specified on the label.

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### SECTION 13: DISPOSAL CONSIDERATIONS

#### Waste treatment methods

<b>Product</b>	Dispose in accordance with all local, state/provincial and federal regulations. Never place unused product down any indoor or outdoor drain.
<b>Contaminated packaging</b>	Consult state and local regulations regarding the proper disposal of container. Follow advice on product label and/or leaflet.
<b>RCRA Information</b>	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

<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, N.O.S. (INDAZIFLAM, DIQUAT DIBROMIDE 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, N.O.S. (INDAZIFLAM, DIQUAT DIBROMIDE 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 WEEDKILLING, N.O.I., other than poison; HAVING A DENSITY OF GREATER THAN 20 LBS. PER CUBIC FOOT

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### SECTION 15: REGULATORY INFORMATION

**EPA Registration No.** 432-1528

#### US Federal Regulations

##### TSCA list

Water 7732-18-5  
Poly(oxy-1,2-ethanediyl),.alpha.-  
phosphono-.omega.-butoxy,  
isopropylamine salt 431040-31-2

#### 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

None.

#### Environmental

##### CERCLA

None.

##### Clean Water Section 307(a)(1)

None.

#### Safe Drinking Water Act Maximum Contaminant Levels

Yes

Diquat dibromide 85-00-7

#### EPA/FIFRA Information:

This chemical is a pesticide product regulated 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 or absorbed through skin.  
Causes moderate eye irritation.

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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
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 - 2      Flammability - 1      Instability - 0      Others - none

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

Health - 2      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 3: Composition / Information on Ingredients. Section 11: Toxicological Information. Section 15: Regulatory information. Reviewed and updated for general editorial purposes.

**Revision Date:** 05/11/2022

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

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