

# SAFETY DATA SHEET



## BROADFORM®

Version 2.0 / USA  
102000012886

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Revision Date: 06/30/2020  
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### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

#### Product identifier

Trade name BROADFORM®  
Product code (UVP) 84469882  
SDS Number 102000012886  
EPA Registration No. 432-1537

#### Relevant identified uses of the substance or mixture and uses advised against

Use Fungicide  
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

Acute toxicity(Oral): Category 4  
Reproductive toxicity: Effects on or via lactation

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



Signal word: Warning

#### Hazard statements

Harmful if swallowed.

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|| May cause harm to breast-fed children.

### Precautionary statements

|| Wash thoroughly after handling.  
|| Do not eat, drink or smoke when using this product.  
|| Obtain special instructions before use.  
|| Do not breathe mist.  
|| Avoid contact during pregnancy/ while nursing.  
|| IF SWALLOWED: Call a POISON CENTER/doctor/physician if you feel unwell.  
|| Rinse mouth.  
|| IF exposed or concerned: Get medical advice/ attention.  
|| 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.

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## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

| Hazardous Component Name | CAS-No.     | Concentration % by weight |
|--------------------------|-------------|---------------------------|
| Fluopyram                | 658066-35-4 | 21.4                      |
| Trifloxystrobin          | 141517-21-7 | 21.4                      |

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## 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** To date no symptoms are known.

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### 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** Water spray, Carbon dioxide (CO<sub>2</sub>), Alcohol-resistant foam, Sand

**Unsuitable** High volume water jet

**Special hazards arising from the substance or mixture** In the event of fire the following may be released: Hydrogen chloride (HCl), Hydrogen cyanide (hydrocyanic acid), Hydrogen fluoride, Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), Nitrogen oxides (NO<sub>x</sub>)

### Advice for firefighters

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

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

**Flash point** > 100 °C

**Auto-ignition temperature** 380 °C / 716 °F

**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). Clean contaminated floors and objects thoroughly, observing environmental regulations. Collect and transfer the product into a properly labelled and tightly closed container.

**Additional advice** Use personal protective equipment. If the product is accidentally spilled, do not allow to enter soil, waterways or waste water canal.

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**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. Before removing gloves clean them with soap and water. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly with soap and water after handling.

### 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.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

| Components      | CAS-No.     | Control parameters                | Update | Basis    |
|-----------------|-------------|-----------------------------------|--------|----------|
| Fluopyram       | 658066-35-4 | 0.34 mg/m <sup>3</sup><br>(TWA)   |        | OES BCS* |
| Trifloxystrobin | 141517-21-7 | 2.7 mg/m <sup>3</sup><br>(SK-SEN) |        | 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

**Eye protection** Safety glasses with side-shields

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|                                    |   |
|------------------------------------|---|
| <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 to beige                                  |
| <b>Physical State</b>                                     | suspension                                      |
| <b>Odor</b>   | characteristic                                  |
| <b>Odour Threshold</b>                                    | No data available                               |
| <b>pH</b>   | 5.0 - 8.0 (100 %) (23 °C)                       |
| <b>Viscosity, kinematic</b>                               | No data available                               |
| <b>Vapor Pressure</b>                                     | No data available                               |
| <b>Vapor Density (Air = 1)</b>                            | No data available                               |
| <b>Density</b>  | ca. 1.17 g/cm <sup>3</sup> (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>                                   | suspensive                                      |
| <b>Minimum Ignition Energy</b>                            | Not applicable                                  |
| <b>Decomposition temperature</b>                          | Stable under normal conditions.                 |
| <b>Self-accelerating decomposition temperature (SADT)</b> | No data available                               |
| <b>Partition coefficient: n-octanol/water</b>             | Not applicable                                  |
| <b>Viscosity</b>  | 240 - 350 mPa.s (20 °C) Velocity gradient 20 /s |
| <b>Flammability</b>                                       | No data available                               |
| <b>Oxidizing properties</b>                               | No oxidizing properties                         |
| <b>Flash point</b>  | > 100 °C  |
| <b>Auto-ignition temperature</b>                          | 380 °C / 716 °F                                 |
| <b>Lower explosion limit</b>                              | No data available                               |
| <b>Upper explosion limit</b>                              | No data available                               |

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|                          |  |
|--------------------------|--|
| <b>Explosivity</b>       | Not explosive<br>92/69/EEC, A.14 / OECD 113                  |
| <b>Particle size</b>     | No data available  |
| <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>             | No incompatible materials known.   |
| <b>Hazardous decomposition products</b>   | No decomposition products expected under normal conditions of use.                   |

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### SECTION 11: TOXICOLOGICAL INFORMATION

|   |  |
|---|--|
| <b>Exposure routes</b>                      | Skin Absorption, Ingestion, Inhalation, Eye contact  |
| <b>Immediate Effects</b>                    |  |
| <b>Skin</b>                                 | Harmful if absorbed through skin.  |
| <b>Ingestion</b>                            | Harmful if swallowed.  |
| <b>Inhalation</b>                           | Harmful if inhaled.  |
| <b>Information on toxicological effects</b> |  |
| <b>Acute oral toxicity</b>                  | LD50 (female Rat) 2,000 mg/kg  |
| <b>Acute inhalation toxicity</b>            | LC50 (Rat) > 1.7 mg/l<br>Exposure time: 4 h<br>Determined in the form of liquid aerosol.<br>Highest attainable concentration.<br>No deaths |
| <b>Acute dermal toxicity</b>                | LD50 (Rat) > 2,000 mg/kg   |
| <b>Skin corrosion/irritation</b>            | No skin irritation (Rabbit)  |
| <b>Serious eye damage/eye irritation</b>    | No eye irritation (Rabbit)   |

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### Respiratory or skin sensitisation

Skin: Non-sensitizing. (Mouse)  
OECD Test Guideline 429, local lymph node assay (LLNA)

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

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

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

Fluopyram did not cause specific target organ toxicity in experimental animal studies.  
Trifloxystrobin did not cause specific target organ toxicity in experimental animal studies.

### Assessment mutagenicity

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

### Assessment carcinogenicity

Fluopyram caused at high dose levels an increased incidence of tumours in rats in the following organ(s): Liver.  
Fluopyram caused at high dose levels an increased incidence of tumours in mice in the following organ(s): Thyroid.  
The tumours seen with Fluopyram were caused through a non-genotoxic mechanism, which is not relevant at low doses. The mechanism that triggers these tumours is not relevant to humans.  
Trifloxystrobin was not carcinogenic in lifetime feeding studies in rats and mice.

### ACGIH

None.

### NTP

None.

### IARC

None.

### OSHA

None.

### Assessment toxicity to reproduction

Fluopyram caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. The reproduction toxicity seen with Fluopyram is related to parental toxicity.

Trifloxystrobin caused reduced body weight development in offspring during lactation only at doses also producing systemic toxicity in adult rats.

### Assessment developmental toxicity

Fluopyram caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Fluopyram are related to maternal toxicity.

Trifloxystrobin caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Trifloxystrobin are related to maternal toxicity.

### Aspiration hazard

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

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### Further information

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

## SECTION 12: ECOLOGICAL INFORMATION

|  |  |
|--|--|
| <b>Toxicity to fish</b>                  | LC50 (Oncorhynchus mykiss (rainbow trout)) 0.091 mg/l<br>Exposure time: 96 h   |
| <b>Toxicity to aquatic invertebrates</b> | EC50 (Daphnia magna (Water flea)) 0.086 mg/l<br>Exposure time: 48 h  |
| <b>Toxicity to aquatic plants</b>        | LC50 (Mysidopsis bahia (mysid shrimp)) 0.00862 mg/l<br>Exposure time: 96 h<br>The value mentioned relates to the active ingredient trifloxystrobin.  |
| <b>Toxicity to aquatic plants</b>        | IC50 (Raphidocelis subcapitata (freshwater green alga)) 0.292 mg/l<br>Growth rate; Exposure time: 72 h   |
| <b>Toxicity to aquatic plants</b>        | EC10 (Desmodesmus subspicatus (green algae)) 0.0025 mg/l<br>Growth rate; Exposure time: 72 h<br>The value mentioned relates to the active ingredient trifloxystrobin.  |
| <b>Biodegradability</b>                  | Fluopyram:<br>Not rapidly biodegradable<br>Trifloxystrobin:<br>Not rapidly biodegradable   |
| <b>Koc</b>                               | Fluopyram: Koc: 279<br>Trifloxystrobin: Koc: 2377  |
| <b>Bioaccumulation</b>                   | Fluopyram: Bioconcentration factor (BCF) 18<br>Does not bioaccumulate.<br>Trifloxystrobin: Bioconcentration factor (BCF) 431<br>Does not bioaccumulate.  |
| <b>Mobility in soil</b>                  | Fluopyram: Moderately mobile in soils<br>Trifloxystrobin: Slightly 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>Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent sites.<br>Do not apply when weather conditions favor runoff or drift.<br>Do not allow product to enter streams, sewers or other waterways.<br>Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water.<br>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.<br>Pesticide, spray mixture or rinse water that cannot be used according to label instructions may be disposed of on site or at an approved waste disposal facility.<br>Follow advice on product label and/or leaflet.  |
| <b>Contaminated packaging</b> | Do not re-use empty containers.<br>Triple rinse containers.<br>Completely empty container into application equipment, then dispose of empty container in a sanitary landfill, by incineration or by other procedures approved by state/provincial and local authorities.<br>If burned, stay out of smoke.<br>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.   |

### 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,<br>N.O.S.<br>(TRIFLOXYSTROBIN 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>(TRIFLOXYSTROBIN 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.

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

### SECTION 15: REGULATORY INFORMATION

**EPA Registration No.** 432-1537

#### US Federal Regulations

##### TSCA list

Water 7732-18-5

1,2-Propanediol 57-55-6

Polyethylene-polypropylene copolymer 9003-11-6

#### 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.  
Avoid contact with skin, eyes and clothing.  
Avoid inhalation of vapour or mist.

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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 12. Ecological information. Reviewed and updated for general editorial purposes.

**Revision Date:** 06/30/2020

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