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

Product identifier
Trade name SPECTICLE® FLO
Product code (UVP) 80193424, 85850822
SDS Number 102000025126
EPA Registration No. 432-1518

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
Acute toxicity (Inhalation): Category 4
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
Harmful if inhaled.
May cause damage to organs (Nervous system) through prolonged or repeated exposure.
May cause damage to organs.

Precautionary statements
Do not breathe spray.
Use only outdoors or in a well-ventilated area.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTER/doctor/physician if you feel unwell.
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 health hazards not otherwise classified.
No physical 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>7.4</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 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.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media
Suitable Water spray, Foam, Carbon dioxide (CO2), 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.

Flash point No data available
Auto-ignition temperature No data available
Lower explosion limit No data available
Upper explosion limit No data available
Explosivity Not applicable
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.

Advice on protection against fire and explosion
Keep away from heat and sources of ignition.

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>
</table>


**SAFETY DATA SHEET**

**SPECTICLE® FLO**

<table>
<thead>
<tr>
<th>Indaziflam</th>
<th>950782-86-2</th>
<th>0.56 mg/m³ (TWA)</th>
<th>OES BCS*</th>
</tr>
</thead>
</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**
  Tightly fitting safety goggles

- **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.

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**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

- **Appearance**
  white to beige

- **Physical State**
  Liquid

- **Odor**
  characteristic

- **Odour Threshold**
  No data available

- **pH**
  5.0 - 8.0 (10 %) (23 °C) (deionized water)

- **Viscosity, kinematic**
  No data available

- **Vapor Pressure**
  No data available

- **Vapor Density (Air = 1)**
  No data available

- **Density**
  1.01 g/cm³ (20 °C)

- **Evaporation rate**
  No data available

- **Boiling Point**
  No data available

- **Melting / Freezing Point**
  No data available

- **Water solubility**
  soluble

- **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 300 - 900 cps (25 °C)
Flammability No data available
Flash point No data available
Auto-ignition temperature No data available
Lower explosion limit No data available
Upper explosion limit No data available
Explosivity Not applicable
Particle size No data available

SECTION 10: STABILITY AND REACTIVITY

Reactivity
Thermal decomposition Stable under normal conditions.
Chemical stability Stable under recommended storage conditions.
Possibility of hazardous reactions No dangerous reaction known under conditions of normal use.
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 Ingestion, Inhalation, Eye contact, Skin contact
Immediate Effects Eye May cause mild irritation to eyes.
Skin May cause mild irritation to the skin.
Information on toxicological effects
Acute oral toxicity LD50 (female Rat) > 5,000 mg/kg
Acute inhalation toxicity
LC50 (male/female combined Rat) > 2.09 mg/l
Exposure time: 4 h
Determined in the form of liquid aerosol.
highest concentration tested

LC50 (male/female combined Rat) > 8.36 mg/l
Exposure time: 1 h
Determined in the form of liquid aerosol.
Extrapolated from the 4 hr LC50.

Acute dermal toxicity
LD50 (male/female combined Rat) > 5,000 mg/kg

Skin corrosion/irritation
Slight irritant effect - does not require labelling. (Rabbit)

Serious eye damage/eye irritation
Minimally irritating. (Rabbit)

Respiratory or skin sensitisation
Skin: Non-sensitizing. (Guinea pig)

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.

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

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.

Toxicity to aquatic invertebrates
EC50 (Daphnia magna (Water flea)) > 9.88 mg/l
Exposure time: 48 h
The value mentioned relates to the active ingredient indaziflam.

Toxicity to aquatic plants
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.

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

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.
Do not allow to get into surface water, drains and ground water.
Do not apply when weather conditions favor runoff or drift.
Drift or runoff from treated areas may adversely affect non-target plants.
Apply this product as specified on the label.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods
Product
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.
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

EPA Registration No. 432-1518
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.

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

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 8: Exposure Controls / Personal Protection. Section 11: Toxicological Information. Reviewed and updated for general editorial purposes.

Revision Date: 05/21/2020

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