

MARENGO™

EPA Registration Number: 432-1518-59807

I. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product name: Marengo
Product use: Herbicide
EPA Registration No.: 432-1518-59807
Company Name: OHP, INC.
 P.O. BOX 230
 MAINLAND, PA 19451
 (800) 659-6745

TRANSPORTATION

EMERGENCY: CHEMTREC:
 (800) 424-9300

EMERGENCY (24 hours a day) and PRODUCT INFORMATION: (800) 356-4647

II. HAZARDS IDENTIFICATIONS

NOTE: Please refer to Section XI for detailed toxicological information.

EMERGENCY OVERVIEW

May cause mild irritation to eyes. May cause mild irritation to the skin. Avoid contact with skin, eyes and clothing. Avoid breathing spray mist.

Physical State: liquid
Odor: characteristic
Appearance: tan
Exposure routes: Ingestion, Inhalation, Eye contact, Skin contact

Immediate Effects

Eye: May cause mild irritation to eyes. Avoid contact with eyes.

Skin: May cause mild irritation to the skin. Avoid contact with skin and clothing.

Inhalation: Avoid breathing spray mist.

Potential Environmental Effect : Toxic to fish and aquatic invertebrates. This product may cause adverse effects on non-target plants.

III. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component Name	CAS No.	Average % by Weight
Indaziflam	950782-86-2	7.40
1,2-Propanediol	57-55-6	8.36

IV. FIRST AID MEASURES

General: When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.

Eye: 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.

Skin: 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.

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.

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.

Notes to physician Treatment .: Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended. There is no specific antidote.

V. FIRE FIGHTING MEASURES

Flash Point: No data available

Autoignition temperature: No data available

Lower Flammability Limit: No data available

Upper Flammability Limit: No data available

Suitable Extinguishing Media : Water spray, Foam, Carbon dioxide (CO2), Dry chemical

Fire Fighting Instructions: 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. Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.

MATERIAL SAFETY DATA SHEET

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VI. ACCIDENTAL RELEASE MEASURES

Personal precautions: Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.

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. Do not allow to enter soil, waterways or waste water canal. Do not allow product to contact vegetation.

VII. HANDLING AND STORAGE

Handling procedures: Maintain exposure levels below the exposure limit through the use of general and local exhaust ventilation. Handle and open container in a manner as to prevent spillage.

Storing Procedures: 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.

Work/Hygienic Procedures: 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.

VIII. EXPOSURE CONTROLS / PERSONAL PROTECTION

General Protection: 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.

Follow all label instructions. Train employees in safe use of the product.

Eye/Face Protection: Tightly fitting safety goggles

Hand protection: Chemical resistant nitrile rubber gloves

Body Protection: Wear long-sleeved shirt and long pants and shoes plus socks.

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.

Exposure Limits

Indaziflam	950782-86-2	OES BCS*	TWA	0.14 mg/m ³
1,2-Propanediol	57-55-6	WEEL	TWA	10 mg/m ³
		TX ESL	ST ESL	20 ug/m ³
		TX ESL	ST ESL	500 ppm
		TX ESL	AN ESL	2 ug/m ³
		TX ESL	AN ESL	50 ppm

* OES BCS: Internal Bayer CropScience
"Occupational Exposure Standard"

IX. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: tan

Physical State: liquid

Odor: characteristic

pH: 5 - 8

Vapor Pressure: no data available

Vapor Density (Air = 1): no data available

Density: 1.01 g/cm³ at 20 °C

Evaporation rate: no data available

Boiling Point: no data available

Melting / Freezing Point: no data available

Water solubility: soluble

Minimum Ignition Energy: no data available

Decomposition temperature: no data available

Partition coefficient:
n-octanol/water: no data available

X. STABILITY AND REACTIVITY

Conditions to avoid: freezing

Incompatibility: no data available

Hazardous Decomposition Products:

Thermal decomposition can lead to release of:
Hydrogen cyanide (hydrocyanic acid)
Hydrogen fluoride
Carbon monoxide
Nitrogen oxides (NOx)

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Hazardous reactions: No dangerous reaction known under conditions of normal use.

Chemical Stability: Stable under normal conditions.

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.

XI. TOXICOLOGICAL INFORMATION

Acute oral toxicity female rat:
LD50: > 5,000 mg/kg

Acute dermal toxicity male/female combined rat:
LD50: > 5,000 mg/kg

Acute inhalation toxicity male/female combined rat:
LC50: > 2.09 mg/l
Exposure time: 4 h
Determined in the form of liquid aerosol.

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

Skin irritation rabbit: Slight irritation

Eye irritation rabbit: Minimally irritating.

Sensitisation guinea pig: Non-sensitizing.

ACGIH None.

NTP None.

IARC None.

OSHA None.

XII. ECOLOGICAL INFORMATION

Toxicity to fish Oncorhynchus mykiss (rainbow trout)
LC50: 0.572 mg/l
Exposure time: 96 h
The value mentioned relates to the active ingredient indaziflam.

Toxicity to aquatic plants Pseudokirchneriella subcapitata
Growth rate
IC50: 0.134 mg/l
Exposure time: 96 h
The value mentioned relates to the active ingredient indaziflam.

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

XIII. DISPOSAL CONSIDERATIONS

General Disposal Guidance: 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.

Container Disposal: Do not re-use empty containers. Triple rinse containers. Then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill or incineration, or if allowed by State 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.

XIV. TRANSPORT INFORMATION

49CFR: Not dangerous goods / not hazardous material

IMDG
UN-Number3082
Class9
Packaging groupIII
Marine pollutantYES

Description of the goods: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (INDAZIFLAM SOLUTION)

MATERIAL SAFETY DATA SHEET

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IATA

UN-Number : 3082
Class : 9
Packaging group : III
Environm. Hazardous Mark: YES
Description of the goods .. : 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.

XV. REGULATORY INFORMATION

EPA Registration No. : 432-1518-59807

US Federal Regulations

TSCA list

1,2-Propanediol 57-55-6

US. Toxic Substances Control Act (TSCA) Section

12(b) Export Notification (40 CFR 707, Subpt D)

None.

SARA Title III - Section 302 - Notification and Information

None.

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

Canadian Regulations

Canadian Domestic Substance List

1,2-Propanediol 57-55-6

Environmental

CERCLA

None.

Clean Water Section 307 Priority Pollutants

None.

Safe Drinking Water Act Maximum Contaminant Levels

None.

XVI. OTHER INFORMATION

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 - 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: New Material Safety Data Sheet.

New Date: 10/31/2011

This information is provided in good faith but without express or implied warranty. The customer assumes all responsibility for safety and use not in accordance with label instructions.

Marengo is a trademark of Bayer.