

**MARENGO®**
**EPA Registration Number: 432-1518-59807**
**1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**
**Product identifier**

Trade name . . . . . MARENGO®

EPA Registration No. . . . . 432-1518-59807

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

Use . . . . . Herbicide

Restrictions on use . . . . . See product label for restrictions.

 Company information . . . . . OHP, Inc.  
 PO Box 51230  
 Mainland, PA 19451  
 (800) 659-6745

**Emergency telephone number**
**TRANSPORTATION EMERGENCY**

(24 hours a day) call . . . . . Chemtec: 1-800-424-9300

**MEDICAL EMERGENCY (24 hours a day) and Product**

Information call . . . . . 1-800-356-4647

**SDS Information or**

Request. . . . . ohp.com

**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



Signal word . . . . . Warning

**Hazard statements**

 Harmful if inhaled.  
 May cause damage to organs (nervous system) through prolonged or repeated exposure.

**Precautionary statements**

 Do not breathe spray.  
 Do not breathe mist.  
 Use only outdoors or in a well-ventilated area.

**IF INHALED** . . . . . Remove person to fresh

 air and keep comfortable for breathing.  
 Call a POISON CENTER/doctor/physician if you feel unwell.

Dispose of contents/container in accordance with local regulation.

**Other hazards** . . . . . No other hazards known.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

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

**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. There is no specific antidote.

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**5. FIREFIGHTING MEASURES**

**Extinguishing media**

**Suitable** . . . . .: Water spray, Foam, Carbon dioxide (CO2), Dry chemical

**Unsuitable** . . . . .: None known.

**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 fire-fighters** . . . . .: 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

**Autoignition temperature** . . . . .: no data available

**Lower explosion limit** . . . . .: no data available

**Upper explosion limit** . . . . .: no data available

**Explosivity** . . . . .: not applicable

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

**7. HANDLING AND STORAGE**

**Precautions for safe handling**

**Advice on safe handling** . . . . .: 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.

**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.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Control parameters**

Components	CAS-No.	Control parameters	Update	Basis
Indaziflam	950782-86-2	0.14 mg/m3 (TWA)		OES BCS*
1,2-Propanediol (Vapor.)	57-55-6	1000ug/m3 (ST ESL)	02 2013	TX ESL
1,2-Propanediol (Vapor.)	57-55-6	50ppb (AN ESL)	02 2013	TX ESL
1,2-Propanediol (Vapor.)	57-55-6	500ppb (ST ESL)	02 2013	TX ESL
1,2-Propanediol (Vapor.)	57-55-6	100ug/m3 (AN ESL)	02 2013	TX ESL
1,2-Propanediol (Aerosol.)	57-55-6	10 mg/m3 (TWA)	2010	WEEL

\*OES BCS: Internal Bayer CropScience "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.

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**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.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance** . . . . . : white to beige

**Physical State** . . . . . : liquid

**Odor** . . . . . : characteristic

**Odour Threshold** . . . . . : no data available

**pH** . . . . . : 5.0 - 8.0

**Vapor Pressure** . . . . . : no data available

**Vapor Density (Air = 1)** . . . . : no data available

**Density** . . . . . : 1.01 g/cm<sup>3</sup> 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** . . . : not applicable

**Decomposition temperature** . . . . . : no data available

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

**Flash point** . . . . . : no data available

**Autoignition temperature** . . . : no data available

**Lower explosion limit** . . . . . : no data available

**Upper explosion limit** . . . . . : no data available

**Explosivity** . . . . . : not applicable

### 10. STABILITY AND REACTIVITY

#### Reactivity

**Thermal decomposition** . . . : no data available

**Chemical stability** . . . . . : Stable under recommended storage conditions.

**Possibility of hazardous reactions** . . . . . : No dangerous reaction known under conditions of normal use.

**Conditions to avoid** . . . . . : freezing

**Incompatible materials** . . . . : no data available

**Hazardous decomposition products** . . . . . : Thermal decomposition can lead to release of:  
Hydrogen cyanide (hydrocyanic acid)  
Hydrogen fluoride  
Carbon monoxide  
Nitrogen oxides (NO<sub>x</sub>)

### 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.

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 irritation** . . . . . : Slight irritation (rabbit)

**Eye irritation** . . . . . : Minimally irritating. (rabbit)

**Sensitisation** . . . . . : Non-sensitizing. (guinea pig)

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**Assessment repeated dose toxicity**

Indaziflam caused neurobehavioral effects and/or neuropathological changes in subchronic studies in rats and dogs.

**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 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 Indaziflam is related to parental toxicity.

**Assessment developmental toxicity**

Indaziflam did not cause developmental toxicity in rats and rabbits.

**Further information** . . . . . : Only acute toxicity studies have been performed on the formulated product.

The non-acute information pertains to the active ingredient(s).

**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 (Water flea (Daphnia magna)) >  
9.88 mg/l  
Exposure time: 48 h

The value mentioned relates to the active ingredient indaziflam.

**Toxicity to aquatic plants** . . . . . : IC50 (Pseudokirchneriella subcapitata) 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.

**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.

**Contaminated packaging** . . : Do not re-use empty containers. Triple rinse containers. 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.

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**14. TRANSPORTATION 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.

**15. REGULATORY INFORMATION**

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**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

**Canadian Regulations**

**Canadian Domestic Substance List**

None.

**Environmental**

**CERCLA**

None.

**Clean Water Section 307 Priority Pollutants**

None.

**Safe Drinking Water Act Maximum Contaminant Levels**

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:

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

**MARENGO®****EPA Registration Number: 432-1518-59807****16. 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** . . . . .: Revised according to the  
current OSHA Hazard Communication Standard  
(29CFR1910.1200)**Revision Date** . . . . .: 08/14/2014

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.

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