SAFETY DATA SHEET

RightLine DITHIOPYR 2 EW

Section 1. Identification

GHS product identifier : RightLine DITHIOPYR 2 EW

Chemical name : Dithiopyr 3,5-Pyridinedicarbothioic acid, 2-(difluoromethyl)-4-(2-methylpropyl)-6-(trifluoromethyl)-, S,S-dimethyl ester

Product code : Not available

Other means of identification : Not available

EPA Registration Number : 93051-10

EPA Signal Word : CAUTION

Product type : Liquid.

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

Identified uses : Herbicide.

Supplier's details : RightLine LLC
950 Falcon Drive
Malden, MO 63863, USA
Tel: 770-335-3015

Emergency telephone number (with hours of operation) : CHEMTREC, U.S.: 1-800-424-9300
Call 800-858-7378 (National Pesticide Information Center)

Section 2. Hazards Identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : EYE IRRITATION - Category 2B
AQUATIC HAZARD (ACUTE) – Category 1
AQUATIC HAZARD (LONG-TERM) – Category 1

GHS label elements

Hazard pictograms :

Signal word : Warning

Hazard statements : H320 - Causes eye irritation.
H400 + H410 – Very toxic to aquatic life with long last effects

Precautionary statements

Prevention : P264+P265 – Wash hands and exposed skin thoroughly after handling. Do not touch eyes.
P273 – Avoid release to the environment not in accordance with the product label.

Response : P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P317 – If eye irritation persists: Get medical help.
P391 – Collect spillage.

Storage : Not available.

Disposal : P501 – Dispose of contents and container in accordance with all local, regional, national

and international regulations.

Hazards not otherwise classified : None known.

Section 3. Composition/Information on Ingredients

Substance/mixture : Mixture

Chemical name : Dithiopyr 3,5-Pyridinedicarbothioic acid, 2-(difluoromethyl)-4-(2-methylpropyl)-6-(trifluoromethyl)-, S,S-dimethyl ester

Ingredient name	%	CAS number
Dithiopyr	22.68-24.09%	97886-45-8

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First Aid Measures

Eye contact : Hold eyes 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 eyes. Call a poison control center or doctor for treatment advice.

Skin contact : Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

Ingestion : Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Never give anything by mouth to an unconscious person.

Inhalation : Move person to fresh air. If person is not breathing, call a poison control, then give artificial respiration, preferably by mouth to mouth. Call a poison control center or doctor for further treatment advice.

Most important symptoms/effects, acute and delayed **Potential acute health effects**

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Inducing vomiting may cause aspiration pneumonia.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting Measures

Extinguishing media

Suitable extinguishing media : Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

Unsuitable extinguishing Media : None known.

Specific hazards arising from the chemical : Hazardous Combustion Products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Sulfur oxides. Nitrogen oxides. Carbon monoxide. Carbon dioxide. Sulfur oxides.

Hazardous thermal decomposition products : None known.

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Isolate fire area. Evacuate downwind. Wear full protective clothing and self-contained breathing apparatus. Do not breathe smoke, gases or vapors generated.

Section 6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

For non-emergency Personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : Isolate area. Keep unnecessary and unprotected personnel from entering the area. Refer to Section 7, Handling, for additional precautionary measures. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection. Keep upwind of spill. Ventilate area of leak or spill.

Environmental precautions : Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. Spills or discharge to natural waterways is likely to kill aquatic organisms.

Methods and materials for containment and cleaning up

Spill : Contain spilled material if possible. Small spills: Absorb with materials such as: Clay. Dirt. Sand. Sweep up. Collect in suitable and properly labeled containers. Large spills: Contact Dow AgroSciences for clean-up assistance. See Section 13, Disposal Considerations, for additional information.

Section 7. Handling and Storage

Precautions for safe handling

Protective measures : Keep out of reach of children. Avoid contact with skin, eyes or clothing. Keep container closed. See Section 8.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking, chewing gum, using tobacco, or using the toilet. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store this product only in its original container in a dry, cool, secured storage area. Store this product above 32°F to avoid crystallization. If crystals form or product freezes, move product to area with ambient temperature above 32°F and shake well until crystals have dissolved.

Section 8. Exposure Controls/Personal Protection

Control parameters **Occupational exposure limits**

Ingredient name	Exposure limits
Dithiopyr	None.

Appropriate engineering Controls : Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

Environmental exposure Controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

Individual protection measures

Hygiene measures : After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash contaminated clothing and safety equipment.

Eye/face protection : Appropriate eye protection should be selected based on the task being performed and the risks involved.

Skin protection

Hand and Body protection : Use gloves, chemically resistant to this material, at all times made of barrier laminate or butyl rubber ≥ 14 mils.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions no respiratory protection should be needed; however, if discomfort is experienced, use an approved air-purifying respirator. The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

Section 9. Physical and Chemical Properties

Appearance

Physical state : Liquid.

Color : Not available.

Odor : Not available

Odor threshold : Not available.

pH : 5.0-6.5

Melting point : Not available.

Boiling point : Not available.

Flash point : >100°C

Evaporation rate : Not available.

Flammability (solid, gas) : Not flammable.

Lower and upper explosive (flammable) limits : Not available.

Section 10. Stability and Reactivity

Reactivity : No dangerous reaction known under conditions of normal use.

Chemical stability : Stable under recommended storage conditions. See Storage, Section 7.

Possibility of hazardous reactions : Hazardous polymerization will not occur.

Conditions to avoid : Exposure to elevated temperatures can cause product to decompose. Generation of gas during decomposition can cause pressure in closed systems.

Incompatible materials : Acids. Amines. Oxidizers.

Hazardous decomposition Products : Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Hydrogen fluoride. Nitrogen oxides. Sulfur oxides.

Section 11. Toxicological Information

Information on toxicological effects **Acute toxicity**

Product/ingredient name	Result	Species	Dose	Exposure
Dithiopyr	LD50 Oral LD50 Dermal LC50 Inhalation	Rat Rat Rat	>5000 mg/kg >5000 mg/kg >5.98 mg/l	- - -

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Dithiopyr	Skin – Non irritating. Eye – Slightly irritating	Rabbits Rabbits	- -	- -	- -

Sensitization

Not a sensitizer to guinea pig.

Mutagenicity

There is no data available.

Carcinogenicity

There is no data available.

Reproductive toxicity

There is no data available.

Teratogenicity

There is no data available.

Specific target organ toxicity (single exposure)

There is no data available.

Specific target organ toxicity (repeated exposure)

There is no data available.

Aspiration hazard

There is no data available.

Information on the likely routes of exposure : Dermal contact. Eye contact. Ingestion.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.
Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No known significant effects or critical hazards.
Inhalation : No known significant effects or critical hazards.
Skin contact : No known significant effects or critical hazards.
Ingestion : No known significant effects or critical hazards.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : No known significant effects or critical hazards.
Potential delayed effects : No known significant effects or critical hazards.

Long term exposure

Potential immediate effects : No known significant effects or critical hazards.
Potential delayed effects : No known significant effects or critical hazards.

Potential chronic health effects

General : No known significant effects or critical hazards.
Carcinogenicity : No known significant effects or critical hazards.
Mutagenicity : No known significant effects or critical hazards.
Teratogenicity : No known significant effects or critical hazards.
Developmental effects : No known significant effects or critical hazards.
Fertility effects : No known significant effects or critical hazards.

Section 12. Ecological Information

Toxicity

Product/ingredient name	Result	Species	Exposure
Dithiopyr	Acute LC50 470 µg/L Freshwater	Bluegill Sunfish – Lepmis macrochirus	96 hours
	Chronic NOEC 20 µg/L Freshwater	Fathead minnow – Pimephales promelas	96 hours
	Acute EC50 158 µg/L Saltwater	Eastern oyster – Crassostrea virginica	96 hours
	Chronic NOEC 13 µg/L Saltwater	Saltwater mysid – Americamysis bahia	-
	IC50 6.11 µg/L vascular aquatic plant	Duckweed – Lemna gibba	-
	NOAEC 2.67 µg/L vascular aquatic plant	Duckweed – Lemna gibba	-
	Acute oral LD50 >2250 mg/kg	Bobwhite quail	
	Acute dietary LC50 >5620 mg/kg	Bobwhite quail and mallard duck	5 days
	Acute contact LD50 80 mg/bee	Honeybee	-

Persistence and degradability

DT50 in soil 17-61 d, depending on the formulation type. The major soil metabolites are the di-acid, the normal mono-acid and the reverse mono-acid; these metabolites, themselves, dissipate almost completely within 1 year.

Bioaccumulative potential

In rat, rapidly absorbed, extensively metabolized and rapidly excreted.

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Stable to soil photolysis.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal Considerations

Disposal methods : If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste

generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. If the material as supplied becomes a waste, follow all applicable regional, national and local laws.

United States - RCRA Toxic hazardous waste "U" List

Ingredient	CAS #	Status	Reference number
Not listed	-	-	-

Section 14. Transport Information

	DOT Classification	IMDG	IATA
UN number	Not regulated	UN3082	UN3082
UN proper shipping name		ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Dithiopyr). Marine pollutant	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Dithiopyr)
Transport hazard class(es)		9 	9 
Packing group		III	III
Environmental hazards		Yes	Yes

DOT-RQ Details : Not available **AERG :** 171

Additional information

DOT Classification : Non-bulk packages of this product are not regulated as hazardous materials in package sizes less than the product reportable quantity, unless transported by inland waterway.

IMDG : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1. 4 to 4.1.1.8.
Emergency schedules F-A, S-F

IATA : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15. Regulatory Information

U.S. Federal regulations : **United States inventory (TSCA 8b)**: Not determined.
Clean Water Act (CWA) 311: Not determined

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

Name	EHS	SARA 302 TPQ		SARA 304 RQ	
		(lbs)	(gallons)	(lbs)	(gallons)
Not available	-	-	-	-	-

SARA 304 RQ : Not listed.

SARA 311/312

Classification : Not listed.

Composition/information on ingredients

Name	Classification
Not listed	-

SARA 313

	Product name	CAS number
Form R - Reporting requirements	None	N/A
Supplier notification	None	N/A

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

California Prop. 65

This product does not contain any chemical known to the State of California to cause cancer or other reproductive harm.

Section 16. Other Information

History

Date of issue mm/dd/yyyy : 03/27/2024

Date of previous issue : N/A

Version : 1.0

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.