



SAFETY DATA SHEET

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

Product identifier: Rhyme™ Fungicide

Product use: Fungicide.

Supplier's name and address:

FMC Corporation

2929 Walnut Street
Philadelphia, PA 19104
(215) 299-6000 (General Information)
msdsinfo@fmc.com (E-mail General Information)

Manufacturer's name and address:

Refer to supplier.

Emergency Telephone #: 1-800-331-3148 (Medical Emergencies-PROSAR)
1-800-424-9300 (24 Hr. Chemtrec Number)

SDS Prepared by: FMC Corporation

SDS Preparation date: September 24, 2015

SECTION 2 — HAZARDS IDENTIFICATION

GHS Signal Word:

Warning

Classification:

Health	Environmental	Physical
Acute toxicity – Inhalation – Category 4 Eye irritation – Category 2A	Aquatic Toxicity – Chronic 2	Not applicable

GHS Pictogram:



Hazard Statements:

Harmful if inhaled.
Causes serious eye irritation.
Toxic to aquatic life with long lasting effects.

Precautionary Statements:

Prevention:

Avoid breathing mists or spray.
Use only outdoors or in a well-ventilated area.
Wash thoroughly after handling.
Wear eye and face protection.
Avoid release to the environment.

Response:

If inhaled: Remove victim to fresh air and keep comfortable for breathing.
If in eyes: Rinse continuously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical attention.
Collect spillage.

Storage:

None

Disposal:

Dispose of contents/container according to label directions.

SECTION 3 — COMPOSITION/INFORMATION ON INGREDIENTS

<u>Ingredients</u>	<u>CAS #</u>	<u>% (weight)</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>
Flutriafol (1H-1,2,4-Triazole-1-ethanol, α -(2-fluorophenyl)- α -(4-fluorophenyl)-	76674-21-0	23	NE	NE
Inert ingredients, including:		77		
Alcohols, C13-C15, ethoxylated	64425-86-1		NE	NE
Propylene glycol	57-55-6		NE	NE

NE= None established

This material is classified as hazardous under OSHA regulations (29CFR 1910.1200).

SECTION 4 — FIRST AID MEASURES

- IF INHALED:** Move person to fresh air.
If person is not breathing, call 911 or ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.
Call poison control center or doctor for further treatment advice.
- IF ON SKIN OR CLOTHING:** Take off contaminated clothing.
Rinse skin immediately with plenty of water for 15-20 minutes.
Call poison control center or doctor for treatment advice.
- IF IN EYES:** 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 poison control center or doctor for treatment advice.
- IF SWALLOWED:** Call a poison control center or doctor for treatment advice.
Have a person sip a glass of water if able to swallow.
Do not induce vomiting unless told to do so by a poison control center or doctor.
Do not give anything by mouth to an unconscious person.

Have the product container or label with you when calling a poison control center or doctor, or when going for treatment. You may also contact 1-866-303-6950 (24-hours) for emergency medical treatment information.

Note to Physician: There is no specific antidote for exposure to this material. Treatment of exposure is as for a general chemical. Gastric lavage and/or administration of activated charcoal can be considered.

Most important symptoms and effects, both acute and delayed: Adverse effects in human have not been reported. When fed to animals at high dosage, similar compounds caused salivation, depression of activity, muscle spasms, ataxia and increased body temperature.

Indication of any immediate medical attention and special treatment needed: Get medical attention if swallowed or eye contact.

SECTION 5 — FIRE FIGHTING MEASURES

Flash point: 212° F (>100° C)

Flammable limits (% by volume): Not applicable

Explosive properties: Not explosive

Suitable extinguishing media: Dry chemical or carbon dioxide for small fires, water spray or foam for large fires. Avoid heavy hose streams.

Special fire-fighting procedures/equipment: Use water spray to keep fire-exposed containers cool. Approach fire from upwind to avoid hazardous vapors and toxic decomposition products. Fight fire from protected location or maximum possible distance. Dike area to prevent water runoff. Fire fighters should wear self-contained breathing apparatus and protective clothing.

Special hazards arising from the substance or mixture: The essential breakdown products are: hydrogen fluoride, nitrogen oxides, carbon monoxide, carbon dioxide and various fluorinated organic compounds.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Personal precautions: Observe all safety precautions when cleaning up spills. Use personal protection equipment. Depending on the magnitude of the spill, this may mean wearing respirator, face mask or safety glasses, chemical resistant clothing, protective gloves and rubber boots when cleaning up spills. See Section 8, Personal Protection. Stop the source of the spill immediately if safe to do so. Avoid and reduce mist formation as much as possible. It is recommended to have a predetermined plan for the handling of spills. Empty, closed containers for the collection of spills should be available.

Environmental precautions: Contain the spill to prevent any further contamination of surface, soil or water. Wash waters must be prevented from entering surface water drains. Uncontrolled discharge into water courses must be alerted to the appropriate regulatory body.

Spill response/Cleanup: If appropriate, surface water drains should be covered. Minor spills on the floor or other impervious surface should be absorbed onto an absorptive material such as universal binder, hydrated lime, Fuller's earth or other absorbent clays. Transfer to suitable containers. Clean area with strong industrial detergent and much water. Absorb wash liquid onto inert absorbent clay and collect in suitable containers. The used containers should be properly closed and labelled.

Large spills which soak into the ground should be dug up and placed in suitable containers.

Spills in water should be contained as much as possible by isolation of the contaminated water. The contaminated water must be collected and removed for treatment or disposal. Refer to Section 13 for disposal.

SECTION 7 — HANDLING AND STORAGE

Safe handling procedures: Avoid contact with eyes, skin, or clothing. Wash thoroughly after handling. Before removing gloves, wash them with water and soap. After work, take off all work clothes and shoes. Take a shower, using water and soap. Wear only clean clothes when leaving the job. Wash protective clothing and protective equipment with water and soap after use. Do not discharge to the environment. Collect all waste material and remains from cleaning equipment, etc., and dispose of as hazardous waste.

Storage recommendations: Storage at temperatures not exceeding 77° F (25° C) is recommended. Protect from fire and heat. This product is stable under normal conditions of warehouse storage. Do not contaminate water, food, or feed by storage and disposal. Store in the original container in a dry area. Do not store in a manner where cross-contamination with other pesticides, fertilizers, food or feed could occur. If spilled during storage or handling, absorb with sand or other inert material and dispose of absorbent in accordance with label instructions and Section 13.

Protect from temperatures above 77° F (25° C).

SECTION 8 — EXPOSURE CONTROLS AND PERSONAL PROTECTION

Ventilation and engineering controls: If handled indoors, provide mechanical exhaust ventilation to minimize concentrations.

Protective gloves: Wear chemical-resistant gloves: barrier laminate, butyl rubber, nitrile rubber or viton.

Eye protection: Wear protective eyewear. It is recommended to have an eye wash fountain immediately available in the workplace when there is a potential for eye contact.

Respiratory protection: The product is not likely to present an airborne exposure concern during normal handling, but in the event of a discharge of the material which produces a heavy vapour or mist, workers should put on officially approved face mask or respiratory protection equipment.

Other protective equipment: Wear long-sleeved shirt and long pants, shoes and socks. Wear appropriate chemical resistant clothing to prevent skin contact depending on the extent of exposure.

Permissible exposure levels: See Section 3.

General hygiene considerations: Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Off-white/brown liquid (suspension in water)

Odor: Characteristic odor between fish- and glue-like

Odor threshold: ND
pH: ND
Melting point/Freezing point: <0° C
Initial boiling point and boiling range: >100° C
Flash point: 212° F (>100° C)
Evaporation rate: ND
Flammability: NA
Upper/lower flammability or explosive limits: ND
Vapor pressure: **Flutriafol:** 7.1 x 10⁻⁰⁹ Pa @ 20° C
Vapor density: ND
Density: 9.17 lb/gal @ 20°C
Solubility(ies): Solubility of **Flutriafol** at 21° C in:
acetone 114 - 133 g/L
ethyl acetate 29 - 33 g/L
n-heptane < 10 g/L
xylene < 10 g/L
dichloroethane 20 - 25 g/L
Partition coefficient (n-octanol/water): **Flutriafol:** Log K_{ow} = 2.29
Auto-ignition temperature: Approximately 450° C
Decomposition temperature: ND
Viscosity: 1500-1750 mPa.s
ND: Not determined
NA: Not applicable

SECTION 10 — REACTIVITY AND STABILITY DATA

Stability and reactivity: This product is stable under the recommended storage and handling conditions described in Section 7.
Hazardous polymerization: Not known to occur.
Conditions to avoid: Heating of the product will produce harmful and irritant vapors.
Materials to avoid (incompatibles): None known.
Hazardous decomposition products in a fire: The essential breakdown products are: hydrogen fluoride, nitrogen oxides, carbon monoxide, carbon dioxide and various fluorinated organic compounds.

SECTION 11 — TOXICOLOGICAL INFORMATION

Routes of exposure: Inhalation, ingestion, skin and eyes.
Acute toxicity: Harmful if inhaled. Not considered as harmful by ingestion or skin contact. The acute toxicity is measured as:
Toxicological data (product):
LC₅₀, inhalation (mg/L/4 hrs) = 2.07 – 5.27
LD₅₀, oral, (mg/kg) = >2000
LD₅₀, dermal, (mg/kg) = >5000
Not irritating to skin
Mildly irritating to eyes
Not a skin sensitizer
Carcinogenicity: No known carcinogenic effects.
Teratogenicity, mutagenicity, other reproductive effects: No known teratogenic, mutagenic or reproductive effects.

SECTION 12 — ECOLOGICAL INFORMATION

Environmental hazards: Product is toxic to fish, aquatic invertebrates and algae. Harmful to bees. It is not considered as harmful to birds, and soil micro- and macro-organisms.
Ecotoxicological information: The ecotoxicity of the active ingredients is measured as:

		Flutriafol
- Fish	Rainbow trout (<i>Oncorhynchus mykiss</i>)	96-h LC ₅₀ 12.54 mg/l
- Invertebrates	Daphnids (<i>Daphnia magna</i>)	48-h EC ₅₀ 8.08 mg/l
- Algae	Green algae (<i>Desmodesmus subspicatus</i>)	72-h IC ₅₀ 6.30 mg/l

- Birds	Red-legged partridge (<i>Alectoris rufa</i>)	LD ₅₀	616 mg/kg
- Earthworms	<i>Eisenia foetida foetida</i>	LC ₅₀	> 500 mg/kg soil
- Insects	Honeybees (<i>Apis mellifera</i>)	LD ₅₀ , oral	>2 µg/bee

Environmental fate:

Flutriafol is not readily degradable or expected to bioaccumulate. **Flutriafol** has moderate mobility in soil.

SECTION 13 — DISPOSAL CONSIDERATIONS

Handling for disposal: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Methods of disposal: Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems. Refer to product label for specific container disposal instructions.

SECTION 14 — TRANSPORTATION INFORMATION

US DOT 49 CFR information:

Not regulated

INTERNATIONAL:

IMDG/IMO (vessel): UN3082, Environmentally hazardous substance, liquid, n.o.s. (flutriafol), 9, PGIII, Marine Pollutant

IATA/ICAO (air): UN3082, Environmentally hazardous substance, liquid, n.o.s. (flutriafol), 9, PGIII, Marine Pollutant

SECTION 15 — REGULATORY INFORMATION

FIFRA: 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 on non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

WARNING

Causes substantial but temporary eye injury. Harmful if swallowed. Do not get in eyes, or on clothing. Wear protective eyewear (goggles, face shield, or safety glasses). Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

EPA/CERCLA Reportable Quantity (RQ): Not applicable

SARA TITLE III:

Sec. 302, Extremely Hazardous Substance Notification: This material is not known to contain any Extremely Hazardous Substances.

Sec. 311/312, Hazard Categories: Immediate (acute) health hazard
Chronic (delayed) health hazard

Sec. 313, Toxic Chemicals Notification: Not subject to SARA notification requirements.

California Proposition 65: This product does not contain any chemicals known to the State of California to cause cancer or reproductive harm.

SECTION 16 — OTHER INFORMATION

HMIS Rating: 2 Health; 0 Flammability; 0 Reactivity

NFPA Rating: 2 Health; 0 Flammability; 0 Reactivity

0-minimal 1-slight 2-moderate 3-severe 4-extreme

Disclaimer

FMC Corporation believes that the information and recommendations contained herein (including data and statements) are accurate as of the date hereof. **NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, IS MADE CONCERNING THE INFORMATION PROVIDED HEREIN.** The information provided herein relates only to the specified product designated and may not be applicable where such product is used in combination with any other materials or in any process. Use of this product is regulated by the U.S. Environmental Protection Agency (EPA). It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Further, since the conditions and methods of use are beyond the control of FMC Corporation, FMC corporation expressly disclaims any and all liability as to any results obtained or arising from any use of the products or reliance on such information.

Prepared By:

FMC Corporation

Cercobin® is a registered trademark of Nippon Soda Co., Ltd.

© 2015 FMC Corporation. All Rights Reserved.

End of Safety Data Sheet