SAFETY DATA SHEET

F7214 RTU Herbicide

SDS # : FO004336-A
Revision date: 2019-11-19
Format: NA
Version 1

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name F7214 RTU Herbicide

Other means of identification

Product Code(s) FO004336-A

Synonyms QUINCLORAC: 3,7-dichloroquinoline-8-carboxylic acid; 3,7-dichloro-8-quinolinecarboxylic acid,

, SULFENTRAZONE (FMC 97285):
2′,4′-dichloro-5′-(4-difluoromethyl-4,5-dihydro-3-methyl-5-oxo-1H-1,2,4-triazol-1-yl) methanesulfonanilide (IUPAC name);
N-[2,4-dichloro-5-[4-(difluoromethyl)-4,5-dihydro-3-methyl-5-oxo-1H-1,2,4-triazol-1-yl]phenyl] methanesulfonamide (CAS name)

Active Ingredient(s) Quinclorac, Sulfentrazone

Chemical Family Quinoline derivative, Triazolinones

Recommended use of the chemical and restrictions on use

Recommended Use: Herbicide

Restrictions on Use: Use as recommended by the label.

Supplier Address

FMC Corporation
2929 Walnut Street
Philadelphia, PA 19104
(215) 299-6000 (General Information)
SDS-Info@fmc.com (E-Mail General Information)

Emergency telephone number

Medical Emergencies :
1 800 / 331-3148 (U.S.A. & Canada)
1 651 / 632-6793 (All Other Countries - Collect)

For leak, fire, spill or accident emergencies, call:
1 800 / 424-9300 (CHEMTREC - U.S.A.)
1 703 / 741-5970 (CHEMTREC - International)
1 703 / 527-3887 (CHEMTREC - Alternate)

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Inhalation (Dusts/Mists)	Category 4

GHS Label elements, including precautionary statements

EMERGENCY OVERVIEW

Warning

Hazard Statements
H332 - Harmful if inhaled

Precautionary Statements - Prevention
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
P271 - Use only outdoors or in a well-ventilated area

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
P312 - Call a POISON CENTER or doctor if you feel unwell

Hazards not otherwise classified (HNOC)
No hazards not otherwise classified were identified.

Other Information
No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Family Quinoline derivative, Triazolinones.

Chemical name	CAS-No	Weight %
Quinclorac	84087-01-4	0.06
Sulfentrazone	122836-35-5	0.02

Synonyms are provided in Section 1.

4. FIRST AID MEASURES

Eye Contact Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for further 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 further treatment advice.

Inhalation Move to fresh air. If person is not breathing, contact emergency medical services, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for further 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 a poison control center or doctor. Do not give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed	None known.
Indication of immediate medical attention and special treatment needed, if necessary	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Small Fire	Dry chemical, Carbon dioxide (CO_2).
Large Fire	Water spray, Foam.
Unsuitable extinguishing media	Avoid heavy hose streams.
Specific Hazards Arising from the Chemical	None known

Explosion data

Sensitivity to Mechanical Impact	No information available.
Sensitivity to Static Discharge	No information available.
Protective equipment and precautions for firefighters	As in any fire, wear self-contained breathing apparatus and full protective gear. Isolate fire area. Evaluate upwind.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Isolate and post spill area. Remove all sources of ignition. Wear suitable protective clothing, gloves and eye/face protection. For personal protection see section 8.
Other	For further clean-up instructions, call FMC Emergency Hotline number listed in Section 1 "Product and Company Identification" above.
Environmental Precautions	Keep people and animals away from and upwind of spill/leak. Keep material out of lakes,streams, ponds, and sewer drains. Keep out of waterways.
Methods for Containment	Dike to confine spill and absorb with non-combustible absorbent such as clay, sand or soil. Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Clean and neutralize spill area, tools and equipment by washing with water and soap. Absorb rinsate and add to the collected waste. Waste must be classified and labeled prior to recycling or disposal. Dispose of waste as indicated in Section 13.

7. HANDLING AND STORAGE

Handling	Handle in accordance with good industrial hygiene and safety practice. Do not contaminate other pesticides, fertilizers, water, food, or feed by storage or disposal.
Storage	Keep away from open flames, hot surfaces and sources of ignition. Keep in a dry, cool and well-ventilated place. Keep out of reach of children and animals. Keep/store only in original container.
Incompatible products	None known

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

Appropriate engineering controls

Engineering measures Apply technical measures to comply with the occupational exposure limits. When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Tightly fitting safety goggles.

Skin and Body Protection Wear long-sleeved shirt, long pants, socks, and shoes.

Hand Protection Use protective gloves made of chemical materials such as nitrile or neoprene. Wash the outside of gloves with soap and water before reuse. Check regularly for leaks.

Respiratory Protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Respiratory protection must be provided in accordance with current local regulations.

Hygiene measures Clean water should be available for washing in case of eye or skin contamination. Remove and wash contaminated clothing before re-use. Wash skin prior to eating, drinking, chewing gum or using tobacco. Shower or bathe at the end of working. Launder work clothing separately from regular household laundry.

General information If the product is used in mixtures, it is recommended that you contact the appropriate protective equipment suppliers.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Aqueous solution
Physical State	Liquid
Color	Colorless
Odor	Soapy
Odor threshold	No information available
pH	8.66 (1.13% solution in water)
Melting point/freezing point	> 0 °C / 32 °F
Boiling Point/Range	> 100 °C / 212 °F
Flash point	> 100 °C / 212 °F
Evaporation Rate	No information available
Flammability (solid, gas)	No information available
Flammability Limit in Air	
Upper flammability limit:	No information available
Lower flammability limit:	No information available
Vapor pressure	No information available
Vapor density	No information available
Relative density	Density = 8.3655 lb/gal
Specific gravity	No information available
Water solubility	Soluble in water
Solubility in other solvents	No information available
Partition coefficient	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Viscosity, kinematic	11.3 centistokes at 20.6ºC and 9.6 centistokes at 40.6ºC, determined using a Brookfield DV-I Prime viscometer with spindle number 1 at 100 rpm.
Viscosity, dynamic	No information available
Explosive properties	Not explosive
Oxidizing properties	Non-oxidizing
Molecular weight	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity	None under normal use conditions
Chemical Stability	Stable under recommended storage conditions.
Possibility of Hazardous Reactions	None under normal processing.
Hazardous polymerization	Hazardous polymerization does not occur.
Conditions to avoid	Heat, flames and sparks
Incompatible materials	None known.
Hazardous Decomposition Products	None known.

11. TOXICOLOGICAL INFORMATION

Product Information

LD50 Oral	> 2000 mg/kg (rat)
LD50 Dermal	> 2000 mg/kg (rat)
LC50 Inhalation	> 2.13 mg/L 4 hr (rat)
Serious eye damage/eye irritation	Moderately irritating (rabbit).
Skin corrosion/irritation	Non-irritating (rabbit).
Sensitization	Non-sensitizing (mice-LLNA).

Information on toxicological effects

Symptoms Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic toxicity	Quinclorac: Prolonged exposure caused decreased body weight, increased liver enzyme and focal chronic interstitial nephritis. Sulfentrazone Prolonged exposure cause decreased hemoglobin content and hematocrit, and increased spleen weight and splenic extramedullary hematopoiesis at high doses in animal studies
Mutagenicity	Quinclorac, Sulfentrazone: Not genotoxic in animal studies
Carcinogenicity	Quinclorac, Sulfentrazone No evidence of carcinogenicity from animal studies
Neurological effects	Quinclorac No neurotoxicity observed in animal studies. Sulfentrazone: Clinical signs of neurotoxicity in laboratory animals was observed at high dose levels
Reproductive toxicity	Quinclorac, Sulfentrazone. No toxicity to reproduction in animal studies.
Developmental toxicity	Quinclorac. Not teratogenic in animal studies. Sulfentrazone: Fetal weight decreased; delayed skeletal ossification observed at maternally non-toxic doses are reversible effects and a dose-response is established; malformations observed in fetuses at maternally toxic doses and consistent with the mode of action for protoporphyrongen oxidase inhibitors.
STOT - single exposure	Not classified.
STOT - repeated exposure	May cause damage to organs through prolonged or repeated exposure. See listed target organs below.
Target organ effects	Liver, kidney, Hematopoietic system
Neurological effects	Quinclorac No neurotoxicity observed in animal studies. Sulfentrazone: Clinical signs of neurotoxicity in laboratory animals was observed at high dose levels

Aspiration hazard The product does not present an aspiration pneumonia hazard.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Quinclorac (84087-01-4)				
Active Ingredient(s)	Duration	Species	Value	Units
Quinclorac	72 h EC50	Algae	6.53	mg/L
	48 h EC50	Daphnia	29.8	mg/L
	96 h LC50	Fish	>100	mg/L
	21 d NOEC	Crustacea	50.4	mg/L

Sulfentrazone (122836-35-5)				
Active Ingredient(s)	Duration	Species	Value	Units
Sulfentrazone	72 h EC50	Algae	32.8	mg/L
	48 h EC50	Crustacea	60.4	mg/L
	96 h LC50	Fish	94	mg/L
	21 d NOEC	Fish	5.9	mg/L
	21 d NOEC	Crustacea	0.51	mg/L

Chemical name	**Toxicity to algae**	**Toxicity to fish**	**Toxicity to daphnia and other aquatic invertebrates**
Toluene 108-88-3	72 h EC50: = 12.5 mg/L (Pseudokirchneriella subcapitata) static 96 h EC50: > 433 mg/L (Pseudokirchneriella subcapitata)	96 h LC50: 11.0 - 15.0 mg/L (Lepomis macrochirus) static 96 h LC50: 14.1 - 17.16 mg/L (Oncorhynchus mykiss) static 96 h LC50: 15.22 - 19.05 mg/L (Pimephales promelas) flow-through 96 h LC50: 5.89 - 7.81 mg/L (Oncorhynchus mykiss) flow-through 96 h LC50: 50.87 - 70.34 mg/L (Poecilia reticulata) static 96 h LC50: = 12.6 mg/L (Pimephales promelas) static 96 h LC50: = 28.2 mg/L (Poecilia reticulata) semi-static 96 h LC50: = 5.8 mg/L (Oncorhynchus mykiss) semi-static 96 h LC50: = 54 mg/L (Oryzias latipes) static	48 h EC50: 5.46 - 9.83 mg/L (Daphnia magna) Static 48 h EC50: = 11.5 mg/L (Daphnia magna)
Ethanolamine 141-43-5	72 h EC50: = 15 mg/L (Desmodesmus subspicatus)	96 h LC50: 114 - 196 mg/L (Oncorhynchus mykiss) static 96 h LC50: 300 - 1000 mg/L (Lepomis macrochirus) static 96 h LC50: = 227 mg/L (Pimephales promelas) flow-through 96 h LC50: = 3684 mg/L (Brachydanio rerio) static 96 h LC50: > 200 mg/L (Oncorhynchus mykiss) flow-through	48 h EC50: = 65 mg/L (Daphnia magna)
Polyethylene glycol 25322-68-3		24 h LC50: > 5000 mg/L (Carassius auratus)	
Propylene glycol 57-55-6	96 h EC50: = 19000 mg/L (Pseudokirchneriella subcapitata)	96 h LC50: 41 - 47 mL/L (Oncorhynchus mykiss) static 96 h LC50: = 51400 mg/L (Pimephales promelas) static 96 h LC50: = 51600 mg/L (Oncorhynchus mykiss) static 96 h LC50: = 710 mg/L (Pimephales promelas)	48 h EC50: > 1000 mg/L (Daphnia magna) Static 24 h EC50: > 10000 mg/L (Daphnia magna)
Citric acid 77-92-9		96 h LC50: = 1516 mg/L (Lepomis macrochirus)	72 h EC50: = 120 mg/L (Daphnia magna)
Magnesium Chloride 7786-30-3	72 h EC50: > 82.7 mg/L (Pseudokirchneriella subcapitata)	96 h LC50: 1970 - 3880 mg/L (Pimephales promelas) static 96 h LC50: = 4210 mg/L (Gambusia affinis) static	48 h EC50: = 140 mg/L (Daphnia magna) Static 24 h EC50: = 1400 mg/L (Daphnia magna)

Persistence and degradability	Sulfentrazone, Quinclorac: Persistent. Does not readily hydrolyze. Not readily biodegradable.
Bioaccumulation	Sulfentrazone, Quinclorac: Does not bioaccumulate.
Mobility	Sulfentrazone, Quinclorac: Mobile. Has potential to reach ground water.

13. DISPOSAL CONSIDERATIONS

Waste disposal methods	Improper disposal of excess pesticide, spray mixture, or rinsate is prohibited. If these wastes cannot be disposed of by use according to label instructions, contact appropriate disposal authorities for guidance. Proper personal protective equipment, as described in Sections 7 and 8, must be worn while handling materials for waste disposal.
Contaminated containers and packages	Containers must be disposed of in accordance with local, state and federal regulations. Refer to the product label for container disposal instructions. Do not reuse or refill this container.

14. TRANSPORT INFORMATION

DOT

This material is not a hazardous material as defined by U.S. Department of Transportation at 49 CFR Parts 100 through 185.

TDG

UN/ID no	UN3082
Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s.
Hazard class	9
Packing Group	III
Marine Pollutant	Sulfentrazone.
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Sulfentrazone), 9, III, Marine Pollutant

ICAO/IATA

UN/ID no	UN3082
Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s.
Hazard class	9
Packing Group	III
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Sulfentrazone), 9, III, Marine Pollutant

IMDG/IMO

UN/ID no	UN3082
Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s.
Hazard class	9
Packing Group	III
Marine Pollutant	Sulfentrazone
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (Sulfentrazone), 9, III, Marine Pollutant

15. REGULATORY INFORMATION

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic health hazard	Yes
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

Clean Water Act
This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Toluene 108-88-3	1000 lb	X	X	X

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs
Toluene 108-88-3	1000 lb 454 kg	

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 as required on the pesticide label:

CAUTION
Harmful if inhaled, swallowed, or absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes, and clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove contaminated clothing and wash before reuse. Keep children and pets out of the treated area until sprays have dried. This product is toxic to marine/estuarine invertebrates.

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

This product does not contain any substances regulated by state right-to-know regulations

International Inventories

Chemical name	TSCA (United States)	DSL (Canada)	EINECS/ELINCS (Europe)	ENCS (Japan)	China (IECSC)	KECL (Korea)	PICCS (Philippines)	AICS (Australia)
Quinclorac 84087-01-4		X	X		X	X	X	X

Chemical name	Mexico - Pollutant Release and Transfer Register - Reporting Emissions for Fabrication, Process or Use -Threshold Quantities	Pollutant Release and Transfer Register - Reporting Emissions - Threshold Quantities
Toluene	1000 5000 kg/yr	1000 kg/yr

16. OTHER INFORMATION

NFPA	**Health Hazards** 1	**Flammability** 1	**Instability** 0	**Special Hazards** -
HMIS	**Health Hazards** 1*	**Flammability** 1	**Physical hazard** 0	**Personal Protection** X

**Indicates a chronic health hazard.*

NFPA/HMIS Ratings Legend Severe = 4; Serious = 3; Moderate = 2; Slight = 1; Minimal = 0

Revision date: 2019-11-19
Reason for revision: Initial Release

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Prepared By:

FMC Corporation

End of Safety Data Sheet