

SAFETY DATA SHEET
Quicksilver T&O Herbicide

SDS # : 6200-A
Revision date: 2019-08-20
Format: NA
Version 1.06



1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name Quicksilver T&O Herbicide

Other means of identification

Product Code(s) 6200-A

Synonyms CARFENTRAZONE-ETHYL: ethyl
 α ,2-dichloro-5-[4-(difluoromethyl)-4,5-dihydro-3-methyl-5-oxo-1H-1,2,4-triazol-1-yl]
-4-fluorobenzenepropanoate (CAS name); ethyl (RS)-2-chloro-3-[2-chloro-5-
(4-difluoromethyl-4,5-dihydro-3-methyl-5-oxo-1H-1,2,4-triazol-1-yl) -4-fluorophenyl]
propionate (IUPAC name)

Active Ingredient(s) Carfentrazone-ethyl

Chemical Family Triazolinones

PCP # 30142

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)
msdsinfo@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)

Carcinogenicity	Category 2
Aspiration toxicity	Category 1

GHS Label elements, including precautionary statements**EMERGENCY OVERVIEW****Danger****Hazard Statements**

H351 - Suspected of causing cancer
 H304 - May be fatal if swallowed and enters airways

**Precautionary Statements - Prevention**

P202 - Do not handle until all safety precautions have been read and understood
 P281 - Use personal protective equipment as required

Precautionary Statements - Response

P308 + P313 - If exposed or concerned: Get medical advice/attention
 P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor
 P331 - Do NOT induce vomiting

Precautionary Statements - Storage

P405 - Store locked up

Precautionary Statements - Disposal

P501 - Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

No hazards not otherwise classified were identified.

Other Information

Very toxic to aquatic life with long lasting effects. May be harmful if swallowed. May be harmful in contact with skin.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Family Triazolinones.

Chemical name	CAS-No	Weight %
Carfentrazone-ethyl	128639-02-1	21.3
Naphtha (petroleum), heavy aromatic	64742-94-5	20-30
2-Methylnaphthalene*	91-57-6	<10 *
1-Methylnaphthalene*	90-12-0	<10 *
Propylene glycol	57-55-6	1-5
Naphthalene*	91-20-3	0.1-1 *

*This component is a constituent(s) of the ingredient: Naphtha (petroleum), heavy aromatic

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, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.
Ingestion	Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. Never 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	Treatment is otherwise controlled removal of exposure followed by symptomatic and supportive care

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Carbon dioxide (CO ₂), Foam, Dry powder, Water spray.
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.
Methods for Containment	Dike to prevent runoff. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.
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	Do not contaminate other pesticides, fertilizers, water, food, or feed by storage or disposal.
Storage	Keep in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. 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

Chemical name	ACGIH TLV	OSHA PEL	NIOSH	Mexico
Carfentrazone-ethyl (128639-02-1)	TWA: 1 mg/m ³	-	-	-
2-Methylnaphthalene* (91-57-6)	TWA: 0.5 ppm	-	-	Mexico: TWA 0.5 ppm
1-Methylnaphthalene* (90-12-0)	TWA: 0.5 ppm	-	-	Mexico: TWA 0.5 ppm
Naphthalene* (91-20-3)	TWA: 10 ppm	TWA: 10 ppm TWA: 50 mg/m ³	IDLH: 250 ppm TWA: 10 ppm TWA: 50 mg/m ³ STEL: 15 ppm STEL: 75 mg/m ³	Mexico: TWA 10 ppm Mexico: TWA 50 mg/m ³ Mexico: STEL 15 ppm
Chemical name	British Columbia	Quebec	Ontario TWAEV	Alberta
2-Methylnaphthalene* (91-57-6)	TWA: 0.5 ppm Skin	-	TWA: 0.5 ppm Skin	-
1-Methylnaphthalene* (90-12-0)	TWA: 0.5 ppm Skin	-	TWA: 0.5 ppm Skin	-
Propylene glycol (57-55-6)	-	-	TWA: 10 mg/m ³ aerosol only TWA: 50 ppm aerosol and vapor TWA: 155 mg/m ³ aerosol and vapor	-
Naphthalene* (91-20-3)	TWA: 10 ppm Skin	TWA: 10 ppm TWA: 52 mg/m ³ STEL: 15 ppm STEL: 79 mg/m ³	TWA: 10 ppm Skin	TWA: 10 ppm TWA: 52 mg/m ³ STEL: 15 ppm STEL: 79 mg/m ³ Skin

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

If there is a potential for exposure to particles which could cause eye discomfort, wear chemical 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. Wash skin prior to eating, drinking, chewing gum or using tobacco. Shower or bathe at the end of working. Remove and wash contaminated clothing before re-use. 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. These recommendations apply to the product as supplied.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Liquid Off-white
Physical State	Liquid
Color	Off-white
Odor	Solvent
Odor threshold	No information available
pH	4.29
Melting point/freezing point	Not applicable
Boiling Point/Range	No information available
Flash point	104 °C / 219 °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	8.80 lb/gal
Specific gravity	No information available
Water solubility	No information available
Solubility in other solvents	No information available
Partition coefficient	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Viscosity, kinematic	No information available
Viscosity, dynamic	No information available
Explosive properties	No information available
Oxidizing properties	No information available
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	Carbon oxides (COx), Hydrogen chloride, Hydrogen fluoride, Nitrogen oxides (NOx).

11. TOXICOLOGICAL INFORMATION

Product Information

LD50 Oral	Similar formulation: 4077 mg/kg (rat)
LD50 Dermal	Similar formulation: > 4000 mg/kg (rat)
LC50 Inhalation	Similar formulation: > 6.31 mg/L (4-hr) (rat)
Serious eye damage/eye irritation	Mildly irritating.
Skin corrosion/irritation	Mildly irritating (rabbit).
Sensitization	Based on a similar formulation, this product is not expected to produce skin sensitization.

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
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Carfentrazone-ethyl (128639-02-1)	= 5143 mg/kg (rat)	> 4000 mg/kg (rat)	> 5 mg/L 4h (rat)
Naphtha (petroleum), heavy aromatic (64742-94-5)	300-2000 mg/kg	> 2 mL/kg (Nyúl)	>5,2 mg/L
2-Methylnaphthalene* (91-57-6)	= 1630 mg/kg (Rat)		
1-Methylnaphthalene* (90-12-0)	= 1840 mg/kg (Rat)		
Propylene glycol (57-55-6)	20000 mg/kg (Rat)	20800 mg/kg (Rabbit)	
Naphthalene* (91-20-3)	= 1110 mg/kg (Rat) = 490 mg/kg (Rat)	= 1120 mg/kg (Rabbit) > 20 g/kg (Rabbit)	> 340 mg/m ³ (Rat) 1 h

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 Long-term exposure caused neurotoxicity (body tremors, decreased motor activity), decreased body weight and increased liver and spleen weight

Mutagenicity Carfentrazone-ethyl : Not genotoxic in laboratory studies.

Carcinogenicity Carfentrazone-ethyl : No evidence of carcinogenicity from animal studies. There was no evidence of carcinogenic activity of naphthalene in male mice, but there was some evidence of carcinogenic activity in female mice and clear evidence of carcinogenic activity in male and female rats in 2-year inhalation studies conducted by the National Toxicology Program (NTP).

Neurological effects Carfentrazone-ethyl : Not neurotoxic.

Reproductive toxicity Carfentrazone-ethyl : No toxicity to reproduction in animal studies.

Developmental toxicity Carfentrazone-ethyl : Not teratogenic in animal studies.

STOT - single exposure Not classified.

STOT - repeated exposure Not classified.

Target organ effects Carfentrazone-ethyl : Red blood cell reduction can occur due to hemoglobin biosynthesis inhibition. Accumulation of precursors of hemoglobin may lead to secondary toxicity to liver and other organs

Neurological effects Carfentrazone-ethyl : Not neurotoxic.

Aspiration hazard Potential for aspiration if swallowed.

Chemical name	ACGIH	IARC	NTP	OSHA
Naphthalene* 91-20-3	A3	Group 2B	Reasonably Anticipated	X

Legend:

ACGIH (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 2B - Possibly Carcinogenic to Humans

NTP (National Toxicology Program)

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

12. ECOLOGICAL INFORMATION

Ecotoxicity

Carfentrazone-ethyl (128639-02-1)				
Active Ingredient(s)	Duration	Species	Value	Units
	72 h EC50	Algae	0.012	mg/L
	96 h LC50	Fish	1.6	mg/L
	48 h LC50	Daphnia	>9.8	mg/L
	96 h NOEC	Algae	1.0	µg/L
	21 d NOEC	Fish	0.0187	mg/L
	21 d NOEC	Crustacea	0.22	mg/L
	LC50	Eisenia fetida	> 820	mg/kg
	LD50 Dietary	Mallard duck <i>Anas platyrhynchos</i>	> 5620	ppm
	LD50 Dietary	Bobwhite quail <i>Colinus virginianus</i>	> 5620	ppm
	LD50 Oral	Bee	> 200	µg/bee
	LD50 contact	Bee	> 200	µg/bee

Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
Carfentrazone-ethyl 128639-02-1	EC50 = 12 µg/l 14d EC50 = 0.0057 mg/L	96 h LC50 = 1.6 mg/L	48 h EC50 = 9.8 mg/L
Propylene glycol 57-55-6	96 h EC50: = 19000 mg/L (<i>Pseudokirchneriella subcapitata</i>)	96 h LC50: 41 - 47 mL/L (<i>Oncorhynchus mykiss</i>) static 96 h LC50: = 51400 mg/L (<i>Pimephales promelas</i>) static 96 h LC50: = 51600 mg/L (<i>Oncorhynchus mykiss</i>) static 96 h LC50: = 710 mg/L (<i>Pimephales promelas</i>)	48 h EC50: > 1000 mg/L (<i>Daphnia magna</i>) Static 24 h EC50: > 10000 mg/L (<i>Daphnia magna</i>)
Naphtha (petroleum), heavy aromatic 64742-94-5	72 h EC50: = 2,5 mg/L (<i>Skeletonema costatum</i>)	96 h LC50: = 1740 mg/L (<i>Lepomis macrochirus</i>) static 96 h LC50: = 19 mg/L (<i>Pimephales promelas</i>) static 96 h LC50: = 2,34 mg/L (<i>Oncorhynchus mykiss</i>) 96 h LC50: = 41 mg/L (<i>Pimephales promelas</i>) 96 h LC50: = 45 mg/L (<i>Pimephales promelas</i>) flow-through	48 h EC50: = 0,95 mg/L (<i>Daphnia magna</i>)
Naphthalene* 91-20-3	72 h EC50: = 0.4 mg/L (<i>Skeletonema costatum</i>)	96 h LC50: 0.91 - 2.82 mg/L (<i>Oncorhynchus mykiss</i>) static 96 h LC50: 5.74 - 6.44 mg/L (<i>Pimephales promelas</i>) flow-through 96 h LC50: = 1.6 mg/L (<i>Oncorhynchus mykiss</i>) flow-through 96 h LC50: = 1.99 mg/L (<i>Pimephales promelas</i>) static 96 h LC50: = 31.0265 mg/L (<i>Lepomis macrochirus</i>) static	48 h EC50: 1.09 - 3.4 mg/L (<i>Daphnia magna</i>) Static 48 h EC50: = 1.96 mg/L (<i>Daphnia magna</i>) Flow through 48 h LC50: = 2.16 mg/L (<i>Daphnia magna</i>)

Persistence and degradability Carfentrazone-ethyl : Non-persistent. Readily hydrolyzed. Not readily biodegradable.

Bioaccumulation Carfentrazone-ethyl : The substance has a low potential to bioaccumulate in the environment.

Mobility Carfentrazone-ethyl : Not relevant.

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 Packaging Containers must be disposed of in accordance with local, state and federal regulations. Refer to the product label for container disposal instructions.

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 The "Marine Pollutant" marking is only applicable when shipped by vessel, and is not applicable when shipped only by road or rail in Canada.

UN/ID no UN3082
Proper Shipping Name Environmentally hazardous substance, liquid, n.o.s.
Hazard class 9
Packing Group III
Marine Pollutant Description Carfentrazone-ethyl .
 UN3082, Environmentally hazardous substance, liquid, n.o.s (Carfentrazone-ethyl), 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 (Carfentrazone-ethyl), 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
EmS No. F-A, S-F
Marine Pollutant Description Carfentrazone-ethyl
 UN3082, Environmentally hazardous substance, liquid, n.o.s (Carfentrazone-ethyl), 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 contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical name	CAS-No	Weight %	SARA 313 - Threshold Values %
Naphthalene* - 91-20-3	91-20-3	0.1-1 *	0.1

SARA 311/312 Hazard Categories

Acute health hazard No
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
Naphthalene* 91-20-3	100 lb	X	X	X

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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
Naphthalene* 91-20-3	100 lb 45.4 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 swallowed, absorbed through the skin or inhaled. Causes moderate eye irritation.
 QuickSilver T&O Herbicide is very toxic to algae and moderately toxic to fish.*

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical name	California Prop. 65
Naphthalene* - 91-20-3	Carcinogen

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
2-Methylnaphthalene* 91-57-6	X		
1-Methylnaphthalene* 90-12-0	X	X	X
Propylene glycol 57-55-6	X		X
Naphthalene* 91-20-3	X	X	X

International Inventories

Chemical name	TSCA (United States)	DSL (Canada)	EINECS/ELINCS (Europe)	ENCS (Japan)	China (IECSC)	KECL (Korea)	PICCS (Philippines)	AICS (Australia)
Carfentrazone-ethyl 128639-02-1					X			
Naphtha (petroleum), heavy aromatic 64742-94-5	X	X	X		X	X	X	X
2-Methylnaphthalene* 91-57-6	X	X	X	X	X		X	X
1-Methylnaphthalene* 90-12-0	X	X	X	X	X		X	X
Propylene glycol 57-55-6	X	X	X	X	X	X	X	X
Naphthalene*	X	X	X	X	X	X	X	X

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91-20-3							
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Mexico - Grade Serious risk, Grade 3

Chemical name	Carcinogen Status	Mexico
2-Methylnaphthalene*		Mexico: TWA 0.5 ppm
1-Methylnaphthalene*		Mexico: TWA 0.5 ppm
Naphthalene*		Mexico: TWA 10 ppm Mexico: TWA 50 mg/m ³ Mexico: STEL 15 ppm

CANADA

WHMIS Statement

This product has been classified in accordance with the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

WHMIS Hazard Class D2A - Very toxic materials



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: 2019-08-20
Reason for revision: SDS sections updated

Disclaimer

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FMC Corporation

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End of Safety Data Sheet