SAFETY DATA SHEET

Carfentrazone 61% MUP

SDS #: 6019-A

Revision date: 2018-05-30

Format: NA Version 1.02



1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name Carfentrazone 61% MUP

Other means of identification

Product Code(s) 6019-A

Synonyms CARFENTRAZONE-ETHYL (FMC 116426): 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

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

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)

Medical Emergencies:

1 800 / 331-3148 (ProPharma Group - U.S.A. & Canada)

1 651 / 632-6793 (ProPharma Group - All Other Countries - Collect)

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This material is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

GHS Label elements, including precautionary statements

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EMERGENCY OVERVIEW

The product contains no substances which at their given concentration, are considered to be hazardous to health.

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 in contact with skin.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Family Triazolinones.

| Chemical name | CAS-No | Weight % |
|----------------------------|-------------|----------|
| Carfentrazone-ethyl | 128639-02-1 | 50-63 |
| Synthetic amorphous silica | 112926-00-8 | 30-40 |

Synonyms are provided in Section 1.

| 4 | FIRST | AID | CI | |
|---|-------|---------------|----|--------|
| 4 | FIRST | $\Delta II)$ | | IK E.S |

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 person 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

Treatment is symptomatic and supportive

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media Carbon dioxide (CO₂), Foam, Dry powder, Water spray.

Specific Hazards Arising from the

Powdered material may form explosive dust-air mixtures

Chemical

Explosion data

Sensitivity to Mechanical Impact No information available. Sensitivity to Static Discharge No information available.

As in any fire, wear self-contained breathing apparatus and full protective gear. Isolate fire Protective equipment and

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precautions for firefighters 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 ContainmentUse a wet sweeping compound or water to prevent dust formation.

Methods for cleaning up Sweep up and shovel into suitable containers for disposal. 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 |
|---------------------|----------------------------|--------------------------|---------------|----------------------------------|
| Synthetic amorphous | - | - | - | Mexico: TWA 10 mg/m ³ |
| silica | | | | |
| (112926-00-8) | | | | |
| Chemical name | British Columbia | Quebec | Ontario TWAEV | Alberta |
| Synthetic amorphous | TWA: 4 mg/m ³ | TWA: 6 mg/m ³ | - | - |
| silica | TWA: 1.5 mg/m ³ | _ | | |
| (112926-00-8) | _ | | | |

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 For dust, splash, mist or spray exposure, wear chemical protective goggles.

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

Hand Protection Protective gloves

Respiratory Protection For dust, splash, mist or spray exposures wear a filtering mask.

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

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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 Powder White

Physical State Solid Color White

Odor Slight Gasoline-like
Odor threshold No information available

pH 5.6 - 6.6 (5% solution) (as aqueous solution)

Melting point/freezing point Not applicable

Boiling Point/Range No information available

Flash point 229 °C / 444 °F Seta Closed Cup

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 No information available Vapor density **Density** No information available Specific gravity No information available Water solubility No information available Solubility in other solvents No information available Partition coefficient No information available No information available **Autoignition temperature** No information available **Decomposition temperature** No information available Viscosity, kinematic Viscosity, dynamic No information available **Explosive properties** No information available **Oxidizing properties** No information available No information available Molecular weight **Bulk density** 15-28 lb/cu ft (tapped)

10. STABILITY AND REACTIVITY

Reactivity Not applicable

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 Heating in air 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 Carfentrazone-ethyl: 5143 mg/kg (rat)
LD50 Dermal Carfentrazone-ethyl: > 4000 mg/kg (rat)

LC50 Inhalation Carfentrazone-ethyl: > 5.09 mg/L 4 hr (rat) - Maximum attainable concentration (zero

mortality)

Serious eye damage/eye irritation Mildly irritating (rabbit).

Skin corrosion/irritation
Sensitization
Non-irritating
Non-sensitizing

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Information on toxicological effects

Symptoms Signs of toxicity in laboratory animals included tremors, abdominal gripping, mucoid anal

disharge, bloody oral discharge, hypothermia, squinting eyes, lacrimation and pink to

orange-brown discoloration of urine.

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

Chronic toxicity Carfentrazone-ethyl: 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.

Neurological effects Carfentrazone-ethyl : Not neurotoxic.

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

Developmental toxicityCarfentrazone-ethyl: Not teratogenic in animal studies.

STOT - single exposure Not classified. STOT - repeated exposure Not classified.

Neurological effects Carfentrazone-ethyl : Not neurotoxic.

Aspiration hazard No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

| Carfentrazone-ethyl (128639-0 | 2-1) | | | |
|-------------------------------|-----------|-----------|--------|-------|
| Active Ingredient(s) | Duration | Species | Value | Units |
| Carfentrazone-ethyl | 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 | ma/L |

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

Bioaccumulation Carfentrazone-ethyl: The substance does not have a potential for bioconcentration.

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 PackagingContainers must be disposed of in accordance with local, state and federal regulations.

Refer to the product label for container disposal instructions.

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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.

<u>TDG</u> Classification below is only applicable when shipped by vessel and is not applicable when

shipped by road or rail only.

UN/ID no UN3077

Proper Shipping Name Environmentally hazardous substance, solid, n.o.s.

Hazard class 9
Packing Group III

Marine Pollutant Carfentrazone-ethyl.

Description UN3077, Environmentally hazardous substance, solid, n.o.s. (Carfentrazone-ethyl), 9, PG

III, Marine Pollutant

ICAO/IATA

UN/ID no UN3077

Proper Shipping Name Environmentally hazardous substance, solid, n.o.s.

Hazard class 9
Packing Group III

Description UN3077, Environmentally hazardous substance, solid, n.o.s. (Carfentrazone-ethyl), 9, PG

III, Marine Pollutant

IMDG/IMO

UN/ID no UN3077

Proper Shipping Name Environmentally hazardous substance, solid, n.o.s.

Hazard class 9
Packing Group III
EmS No. F-A, S-F

Marine Pollutant Carfentrazone-ethyl

Description UN3077, Environmentally hazardous substance, solid, n.o.s. (Carfentrazone-ethyl), 9, PG

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

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

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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, inhaled or absorbed through skin.

This product is highly toxic to algae and toxic to fish and aquatic organisms.

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

| Chemical name | New Jersey | Massachusetts | Pennsylvania |
|----------------------------|------------|---------------|--------------|
| Synthetic amorphous silica | X | X | X |
| 112926-00-8 | | | |

International Inventories

| Chemical name | TSCA (United States) | DSL (Canada) | EINECS/ELINC S (Europe) | ENCS (Japan) | China (IECSC) | KECL (Korea) | PICCS (Philippines) | AICS (Australia) |
|--|----------------------------|-----------------|----------------------------|-----------------|------------------|--------------|------------------------|---------------------|
| Synthetic amorphous silica 112926-00-8 | | Х | | Х | Х | X | Х | Х |

Mexico - Grade Slight risk, Grade 1

| Chemical name | Carcinogen Status | Mexico |
|----------------------------|-------------------|----------------------------------|
| Synthetic amorphous silica | | Mexico: TWA 10 mg/m ³ |

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 See section 2 for more information

| 16. OTHER INFORMATION | | | | | |
|-----------------------|------------------|----------------|-------------------|-----------------------|--|
| | To a second | 1 | | | |
| NFPA | Health Hazards 1 | Flammability 1 | Instability 0 | Special Hazards - | |
| HMIS | Health Hazards 1 | Flammability 1 | Physical hazard 0 | Personal Protection X | |

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Reason for revision: (M)SDS sections updated

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End of Safety Data Sheet