

**SAFETY DATA SHEET**  
**AIM® EC HERBICIDE**

**SDS # :** 6165-A  
**Revision date:** 2016-05-26  
**Format:** NA  
**Version** 1.04



**1. PRODUCT AND COMPANY IDENTIFICATION**

**Product Identifier**

**Product Name** AIM® EC HERBICIDE

**Other means of identification**

**Product Code(s)** 6165-A

**Synonyms** CARFENTRAZONE-ETHYL (FMC 116426): ethyl  $\alpha$ ,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 #** 28573

**Recommended use of the chemical and restrictions on use**

**Recommended Use:** Herbicide

**Restrictions on Use:** Use as recommended by the label

**Manufacturer 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 (PROSAR - U.S.A. & Canada)  
1 651 / 632-6793 (PROSAR - All Other Countries - Collect)  
For leak, fire, spill or accident emergencies, call:  
1 800 / 424 9300 (CHEMTREC - U.S.A.)  
1 703 / 527 3887 (CHEMTREC - Collect - All Other Countries)

**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**

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

**Precautionary Statements - Prevention**

P201 - Obtain special instructions before use  
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**

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

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

**Chemical Family** Triazolinones.

Chemical name	CAS-No	Weight %
Carfentrazone-ethyl	128639-02-1	21.9
Naphtha (petroleum), heavy aromatic	64742-94-5	<70
2-Methylnaphthalene	91-57-6	<30
1-Methylnaphthalene	90-12-0	<20
n-Butanol	71-36-3	1-5
Naphthalene	91-20-3	0.1-1

Synonyms are provided in Section 1.

**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. Call a poison control

center or doctor for further treatment advice.

<b>Skin Contact</b>	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.
<b>Inhalation</b>	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.
<b>Ingestion</b>	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 Do not give anything by mouth to an unconscious person. 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. Do not induce vomiting or give anything by mouth to an unconscious person.
<b>Most important symptoms and effects, both acute and delayed</b>	Central nervous system effects. Gastrointestinal effects.
<b>Indication of immediate medical attention and special treatment needed, if necessary</b>	Treatment is symptomatic and supportive. Contains petroleum distillate. Vomiting may cause aspiration pneumonia.

## 5. FIRE-FIGHTING MEASURES

<b>Suitable Extinguishing Media</b>	Water spray. Carbon dioxide (CO <sub>2</sub> ). Foam. Dry powder.
<b>Specific Hazards Arising from the Chemical</b>	Slightly combustible. May support combustion at elevated temperatures.
<b>Explosion data</b>	
<b>Sensitivity to Mechanical Impact</b>	Not sensitive.
<b>Sensitivity to Static Discharge</b>	Not sensitive.
<b>Protective equipment and precautions for firefighters</b>	Wear self-contained breathing apparatus and protective suit.

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions</b>	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.
<b>Other</b>	For further clean-up instructions, call FMC Emergency Hotline number listed in Section 1 "Product and Company Identification" above.
<b>Environmental Precautions</b>	Keep people and animals away from and upwind of spill/leak. Keep material out of lakes, streams, ponds, and sewer drains. See Section 12 for additional Ecological Information.
<b>Methods for Containment</b>	Dike to prevent runoff. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.
<b>Methods for cleaning up</b>	Clean and neutralize spill area, tools and equipment by washing with bleach 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

<b>Handling</b>	Do not contaminate other pesticides, fertilizers, water, food, or feed by storage or disposal.
<b>Storage</b>	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.
<b>Incompatible products</b>	None known Strong oxidizing agents

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Control parameters

Chemical name	ACGIH TLV	OSHA PEL	NIOSH	Mexico
2-Methylnaphthalene (91-57-6)	TWA: 0.5 ppm	-	-	-
1-Methylnaphthalene (90-12-0)	TWA: 0.5 ppm	-	-	-
n-Butanol (71-36-3)	TWA: 20 ppm	TWA: 100 ppm TWA: 300 mg/m <sup>3</sup>	IDLH: 1400 ppm Ceiling: 50 ppm Ceiling: 150 mg/m <sup>3</sup>	Mexico: Ceiling 50 ppm Mexico: Ceiling 150 mg/m <sup>3</sup>
Naphthalene (91-20-3)	TWA: 10 ppm	TWA: 10 ppm TWA: 50 mg/m <sup>3</sup>	IDLH: 250 ppm TWA: 10 ppm TWA: 50 mg/m <sup>3</sup> STEL: 15 ppm STEL: 75 mg/m <sup>3</sup>	Mexico: TWA 10 ppm Mexico: TWA 50 mg/m <sup>3</sup> Mexico: STEL 15 ppm Mexico: STEL 75 mg/m <sup>3</sup>
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	-
n-Butanol (71-36-3)	TWA: 15 ppm Ceiling: 30 ppm	Ceiling: 50 ppm Ceiling: 152 mg/m <sup>3</sup> Skin	TWA: 20 ppm	TWA: 20 ppm TWA: 60 mg/m <sup>3</sup>
Naphthalene (91-20-3)	TWA: 10 ppm STEL: 15 ppm Skin	TWA: 10 ppm TWA: 52 mg/m <sup>3</sup> STEL: 15 ppm STEL: 79 mg/m <sup>3</sup>	TWA: 10 ppm  STEL: 15 ppm Skin	TWA: 10 ppm TWA: 52 mg/m <sup>3</sup> STEL: 15 ppm STEL: 79 mg/m <sup>3</sup> Skin

**Legend**

Skin (S\*) - Skin Absorber

**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. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion and the contact time.

**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 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

<b>Appearance</b>	Brown orange liquid
<b>Physical State</b>	Liquid
<b>Color</b>	Brown orange
<b>Odor</b>	Aromatic
<b>Odor threshold</b>	No information available
<b>pH</b>	5.3 (1% solution)
<b>Melting point/freezing point</b>	Not applicable
<b>Boiling Point/Range</b>	No information available
<b>Flash point</b>	75.6 °C / 168.08 °F Closed cup
<b>Evaporation Rate</b>	No information available
<b>Flammability (solid, gas)</b>	No information available
<b>Flammability Limit in Air</b>	
<b>Upper flammability limit:</b>	No information available
<b>Lower flammability limit:</b>	No information available
<b>Vapor pressure</b>	No information available
<b>Vapor density</b>	No information available
<b>Density</b>	9.0 lb/gal
<b>Specific gravity</b>	1.08
<b>Water solubility</b>	No information available
<b>Solubility in other solvents</b>	No information available
<b>Partition coefficient</b>	No information available
<b>Autoignition temperature</b>	No information available
<b>Decomposition temperature</b>	No information available
<b>Viscosity, kinematic</b>	No information available
<b>Viscosity, dynamic</b>	No information available
<b>Explosive properties</b>	No information available
<b>Oxidizing properties</b>	No information available
<b>Molecular weight</b>	No information available
<b>Bulk density</b>	No information available

## 10. STABILITY AND REACTIVITY

<b>Reactivity</b>	None under normal use conditions
<b>Chemical Stability</b>	Stable under recommended storage conditions.
<b>Possibility of Hazardous Reactions</b>	None under normal processing.
<b>Hazardous polymerization</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid</b>	Heat, flames and sparks
<b>Incompatible materials</b>	None known.
<b>Hazardous Decomposition Products</b>	Carbon monoxide (CO). Carbon dioxide (CO <sub>2</sub> ). Hydrogen chloride. Hydrogen fluoride. Nitrogen oxides (NO <sub>x</sub> ). Sulfur oxides.

## 11. TOXICOLOGICAL INFORMATION

### Product Information

<b>LD50 Oral</b>	4077 mg/kg (rat)
<b>LD50 Dermal</b>	> 4000 mg/kg (rat)
<b>LC50 Inhalation</b>	> 6.31 mg/L 4 hr (rat)
<b>Serious eye damage/eye irritation</b>	Mildly irritating.
<b>Skin corrosion/irritation</b>	Mildly irritating (rabbit).
<b>Sensitization</b>	Non-sensitizing

**Information on toxicological effects**

**Symptoms** Signs of toxicity in laboratory animals included mydriasis, cyanosis, ataxia, dyspnea, lacrimation, and diarrhea.

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

**Chronic toxicity** Carfentrazone-ethyl: Long-term exposure caused hematotoxicity and deposit of porphyrin in the liver in animal studies.

**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.

**Neurological effects** Carfentrazone-ethyl : Not neurotoxic.

**Aspiration hazard** Potential for aspiration if swallowed. Vomiting after ingestion of this product may cause aspiration of aromatic hydrocarbons into the lungs, which may result in fatal pulmonary edema.

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
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	mg/L

Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
Naphthalene 91-20-3	72 h EC50: = 0.4 mg/L (Skeletonema costatum)	96 h LC50: 0.91 - 2.82 mg/L (Oncorhynchus mykiss) static 96 h LC50: 5.74 - 6.44 mg/L (Pimephales promelas) flow-through 96 h LC50: = 1.6 mg/L (Oncorhynchus mykiss) flow-through 96 h LC50: = 1.99 mg/L (Pimephales promelas) static 96 h LC50: = 31.0265 mg/L	48 h EC50: 1.09 - 3.4 mg/L (Daphnia magna) Static 48 h EC50: = 1.96 mg/L (Daphnia magna) Flow through 48 h LC50: = 2.16 mg/L (Daphnia magna)

	(Lepomis macrochirus) static	
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**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 : Mobility in soil: 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.

**Contaminated Packaging** 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.

Chemical name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Naphthalene 91-20-3	U165	Included in waste streams: F024, F025, F034, F039, K001, K035, K060, K087, K145		
Chemical name			California Hazardous Waste Status	
Naphthalene 91-20-3			Toxic	

**14. TRANSPORT INFORMATION**

**DOT** This material is a Combustible liquid and is, therefore, not subject to the hazardous materials regulations when in non-bulk packages shipped within the USA per 49 CFR §173.150(f)(2).

**UN/ID no** NA1993  
**Proper Shipping Name** Combustible liquid, n.o.s  
**Hazard class** 3  
**Packing Group** III  
**Reportable Quantity (RQ)** Napthalene

**TDG** Classification below is only applicable when shipped by vessel and is not applicable when shipped by road or rail only.

**UN/ID no** UN3082  
**Hazard class** 9  
**Packing Group** III  
**Marine Pollutant** Carfentrazone-ethyl .  
**Description** UN3082, Environmentally hazardous substance, liquid, n.o.s. (Carfentrazone-ethyl), 9, PG III, Marine Pollutant

**ICAO/IATA**

**UN/ID no** UN3082  
**Hazard class** 9  
**Packing Group** III  
**Description** UN3082, Environmentally hazardous substance, liquid, n.o.s. (Carfentrazone-ethyl), 9, PG III, Marine Pollutant

**IMDG/IMO**

**UN/ID no** UN3082  
**Hazard class** 9  
**Packing Group** III  
**EmS No.** F-A, S-F  
**Marine Pollutant** Carfentrazone-ethyl  
**Description** UN3082, Environmentally hazardous substance, liquid, 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

Chemical name	CAS-No	Weight %	SARA 313 - Threshold Values %
n-Butanol - 71-36-3	71-36-3	1-5	1.0
Naphthalene - 91-20-3	91-20-3	0.1-1	0.1

**SARA 311/312 Hazard Categories**

Acute health hazard	Yes
Chronic health hazard	Yes
Fire hazard	Yes
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

**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
n-Butanol 71-36-3	5000 lb 2270 kg	
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.  
Carfentrazone-ethyl 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**



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This product does not contain any substances regulated by 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
n-Butanol 71-36-3	X	X	X
Naphthalene 91-20-3	X	X	X

**International Inventories**

Chemical name	TSCA (United States)	DSL (Canada)	EINECS/ELINC S (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	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
n-Butanol 71-36-3	X	X	X	X	X	X	X	X
Naphthalene 91-20-3	X	X	X	X	X	X	X	X

**Mexico - Grade** Moderate risk, Grade 2

Chemical name	Carcinogen Status	Mexico
n-Butanol		Mexico: Ceiling 50 ppm Mexico: Ceiling 150 mg/m <sup>3</sup>
Naphthalene		Mexico: TWA 10 ppm Mexico: TWA 50 mg/m <sup>3</sup> Mexico: STEL 15 ppm Mexico: STEL 75 mg/m <sup>3</sup>

**CANADA**

**WHMIS Statement**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

**WHMIS Hazard Class** B3 - Combustible liquid  
D2A - Very toxic materials



**16. OTHER INFORMATION**

NFPA	Health Hazards 1	Flammability 2	Instability 0	Special Hazards -
HMIS	Health Hazards 1*	Flammability 2	Physical hazard 0	Personal Protection X

*\*Indicates a chronic health hazard.*

Revision date: 2016-05-26  
Reason for revision: (M)SDS sections updated

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**End of Safety Data Sheet**