

# MATERIAL SAFETY DATA SHEET

## Command® 3 ME Microencapsulated Herbicide

MSDS #: 1693-A  
Revision date: 2014-12-17  
Version 2



This MSDS has been prepared to meet U.S. OSHA Hazard Communication Standard 29 CFR 1910.1200 And Canadian Workplace Hazardous Materials Information System (WHMIS) requirements.

### 1. PRODUCT AND COMPANY IDENTIFICATION

<b>Product Name</b>	Command® 3 ME Microencapsulated Herbicide
<b>Formula code</b>	1693
<b>Active Ingredient(s)</b>	Clomazone
<b>Synonyms</b>	Clomazone: FMC 57020; 2-(2-chlorobenzyl)-4,4-dimethyl-1,2-oxazolidin-3-one; 2-[(2-chlorophenyl)methyl]-4,4-dimethyl-3-isoxazolidinone
<b>Chemical Family</b>	Triazolinones
<b>Recommended Use:</b>	Herbicide
<b>Alternate Commercial Name</b>	Command® 360 ME, Command® 36 CS, Command® 360 CS, Command® CS, Centium™ 36 CS, Cirrus™ 36 CS, Cirrus™ CS, Gamit® 36 CS, Gamit® 360 CS, Gamit® CS, Magister CS

**Manufacturer/Supplier**  
FMC Corporation  
Agricultural Solutions  
1735 Market Street  
Philadelphia, PA 19103  
General Information:  
Phone: (215) 299-6000  
E-Mail: msdsinfo@fmc.com

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

### 2. HAZARDS IDENTIFICATION

<b><u>Appearance</u></b>	Brown Liquid
<b><u>Physical State</u></b>	Liquid
<b><u>Odor</u></b>	Slight Aromatic
<b><u>Flammable properties</u></b>	Not flammable.
<b><u>Potential Health Effects</u></b>	
<b><u>Principal Routes of Exposure</u></b>	Eye Contact Skin Contact Inhalation Ingestion
<b><u>Acute Effects</u></b>	
<b><u>Eyes</u></b>	May cause slight irritation.
<b><u>Skin</u></b>	Substance may cause slight skin irritation.
<b><u>Inhalation</u></b>	May cause irritation of respiratory tract.
<b><u>Ingestion</u></b>	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May cause central nervous system depression.

**Chronic Effects** Clomazone: Long-term exposure caused slight liver weight increase and hepatocyte enlargement in animal studies

**Environmental Hazard** See Section 12 for additional Ecological Information.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

**Hazardous ingredients**

Chemical name	CAS-No	Weight %
Clomazone	81777-89-1	31
Sodium Nitrate	7631-99-4	1-5
Calcium chloride	10043-52-4	1-5

**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 (within the U.S. and Canada) or an ambulance, then give artificial respiration, preferably by 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.

**5. FIRE-FIGHTING MEASURES**

**Flammable properties** Not flammable.

**Suitable Extinguishing Media** Carbon dioxide (CO<sub>2</sub>), Water spray, Foam, Dry chemical.

**Hazardous Combustion Products** None known.

**Protective equipment and precautions for firefighters** Wear self-contained breathing apparatus and protective suit.

**NFPA**

<b>Health Hazards</b>	1
<b>Flammability</b>	1
<b>Stability</b>	0
<b>Special Hazards</b>	-

**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.

**Environmental Precautions** See Section 12 for additional Ecological Information.

**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 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.

**Other** For further clean-up instructions, call FMC Emergency Hotline number listed in Section 1 "Product and Company Identification" above.

**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.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Exposure Guidelines

Chemical name	British Columbia	Quebec	Ontario TWAEV	Alberta
Calcium chloride 10043-52-4			TWA: 5 mg/m <sup>3</sup>	

Occupational exposure 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.

**Personal protective equipment**

**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.

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

**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, shoes, and gloves.

**Hand Protection** Protective gloves

**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.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Information on basic physical and chemical properties**

<b>Appearance</b>	Brown Liquid
<b>Color</b>	Brown
<b>Physical State</b>	Liquid
<b>Odor</b>	Slight Aromatic
<b>pH</b>	6.5 @ 20°C No information available
<b>Boiling Point/Range</b>	Not applicable
<b>Flash point</b>	> 94 °C / > 201 °F Tag Closed Cup
<b>Flammable properties</b>	Not flammable. No information available.
<b>Water solubility</b>	Dispersible in water

**10. STABILITY AND REACTIVITY**

<b>Stability</b>	Stable.
<b>Conditions to Avoid</b>	Heat, flames and sparks
<b>Hazardous Decomposition Products</b>	Carbon oxides (COx), Nitrogen oxides (NOx), Chlorine, Hydrogen chloride.
<b>Hazardous polymerization</b>	Hazardous polymerization does not occur.

**11. TOXICOLOGICAL INFORMATION**

**Acute Effects**

<b>LD50 Dermal</b>	> 5000 mg/kg (rat)
<b>LD50 Oral</b>	> 5000 mg/kg (rat)
<b>LC50 Inhalation</b>	> 3.86 mg/L 4 hr (rat) - Maximum attainable concentration (zero mortality)

**Sensitization** Mild sensitizer

**Chronic Effects**

<b>Chronic toxicity</b>	Clomazone: Long-term exposure caused slight liver weight increase and hepatocyte enlargement in animal studies
<b>Carcinogenicity</b>	Clomazone: No evidence of carcinogenicity from animal studies
<b>Mutagenicity</b>	Clomazone: Not genotoxic in animal studies
<b>Reproductive toxicity</b>	Clomazone: No toxicity to reproduction in animal studies
<b>Neurological effects</b>	Clomazone: Not neurotoxic
<b>Developmental toxicity</b>	Clomazone: Not teratogenic in animal studies.
<b>Target organ effects</b>	Clomazone: Liver

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity effects**

<b>Clomazone (81777-89-1)</b>				
Active Ingredient(s)	Duration	Species	Value	Units
Clomazone	72 h EC50	Algae	0.136	mg/L

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	48 h EC50	Crustacea	12.7	mg/L
	96 h LC50	Fish	15.5	mg/L
	21 d NOEC	Fish	2.30	mg/L
	21 d NOEC	Crustacea	2.2	mg/L
	96 h NOEC	Algae	0.05	mg/L

Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to Microorganisms	Toxicity to daphnia and other aquatic invertebrates
Sodium Nitrate		96 h LC50: = 2000 mg/L (Lepomis macrochirus) 96 h LC50: 994.4 - 1107 mg/L (Oncorhynchus mykiss)		
Calcium chloride		96 h LC50: = 10650 mg/L (Lepomis macrochirus)		48 h LC50: 2400 mg/L (Daphnia magna)

**Environmental Fate**

Chemical name	Partition coefficient
Sodium Nitrate	-3.8

**Persistence and degradability** Clomazone: Moderately persistent Does not readily hydrolyze Not readily biodegradable**Bioaccumulation** Clomazone The substance does not have a potential for bioconcentration**Mobility** Clomazone: Moderately mobile Has some potential to reach groundwater.**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.**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.**Packaging Type** Bulk, Non-Bulk**TDG** Not regulated**ICAO/IATA** Not regulated**IMDG/IMO** Not regulated**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

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Chemical name	CAS-No	Weight %	SARA 313 - Threshold Values %
Methylene diphenyl diisocyanate (polymeric)	9016-87-9	3.23	1.0

## 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

## 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

## International Regulations

### Mexico - Grade

Slight risk, Grade 1

### CANADA

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

Non-controlled

## 16. OTHER INFORMATION

Revision date: 2014-12-17  
Reason for revision: (M)SDS sections updated.

### Disclaimer

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**End of Safety Data Sheet**