



## SAFETY DATA SHEET

Command 36 ME

SDS # : 1693-A

Revision date: 2018-08-22

Format: AP

Version 1

### Section 1: PRODUCT AND COMPANY IDENTIFICATION

<b>Product Name</b>	Command 36 ME
<b>Product Code(s)</b>	1693-A
<b>Synonyms</b>	Clomazone (F57020): 2-(2-chlorobenzyl)-4,4-dimethyl-1,2-oxazolidin-3-one (IUPAC name); 2-[(2-chlorophenyl)methyl]-4,4-dimethyl-3-isoxazolidinone (CAS Name)
<b>Active Ingredient(s)</b>	Clomazone
<b>Alternate Commercial Name</b>	Command® 360 ME, Command® 36 CS, Command® 360 CS, Command® CS, Centium™ 36 CS, Cirrus™ 36 CS, Cirrus™ CS, Magister CS
<b>Chemical Family</b>	Triazolinones
<b>Recommended Use:</b>	Herbicide.
<b>Restrictions on Use:</b>	Use as recommended by the label.
<b><u>Manufacturer/Supplier</u></b>	<b><u>Importer</u></b>
FMC Corporation 2929 Walnut Street, Philadelphia, Pennsylvania 19104 USA General Information: Phone: (215) 299-6000 E-Mail: msdsinfo@fmc.com	FMC VIETNAM COMPANY LIMITED No. 12 lot B, Thong Nhat Road Song Than 2 Industrial Zone Di An Ward, Di An Town Binh Duong Province Vietnam Phone: (+84) 02835207622 Fax: (+84) 02835207763

#### Emergency telephone

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)

### Section 2: HAZARDS IDENTIFICATION

#### GHS Classification

Acute toxicity - Inhalation (Dusts/Mists)	Category 5
Chronic aquatic toxicity	Category 1

#### Label Elements

**Signal Word****WARNING****Hazard Statements**

H333 - May be harmful if inhaled

H410 - Very toxic to aquatic life with long lasting effects

**Precautionary Statements - Prevention**

P273 - Avoid release to the environment

**Precautionary Statements - Response**

P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell

P391 - Collect spillage

**Precautionary Statements - Disposal**

P501 - Dispose of contents/container according to label directions

**Other Information**

None known

### Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

**Synonyms** Clomazone (F57020): 2-(2-chlorobenzyl)-4,4-dimethyl-1,2-oxazolidin-3-one (IUPAC name);  
2-[(2-chlorophenyl)methyl]-4,4-dimethyl-3-isoxazolidinone (CAS Name)

Chemical name	CAS-No	Weight %
Clomazone	81777-89-1	31
Sodium Nitrate	7631-99-4	1-5
Calcium chloride	10043-52-4	1-5
1,6-hexanediamine (70%)	124-09-4	1-5

### Section 4: FIRST AID MEASURES

**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.

**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.

**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.

**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**

Symptoms of overexposure include decreased activity, tearing eyes, bleeding from the nose and incoordination.

**Protection of first-aiders**

Use personal protective equipment. See Section 8 for more detail.

**Indication of immediate medical**

Treat symptomatically.

attention and special treatment  
needed, if necessary

## Section 5: FIRE FIGHTING MEASURES

<b>Explosive properties</b>	Not explosive.
<b>Suitable Extinguishing Media</b>	Carbon dioxide (CO <sub>2</sub> ), Water spray, Foam, Dry chemical.
<b>Unsuitable extinguishing media</b>	No information available
<b>Specific Hazards Arising from the Chemical</b>	Thermal decomposition can lead to release of irritating gases and vapors.
<b>Protective equipment and precautions for firefighters</b>	As in any fire, wear self-contained breathing apparatus and full protective gear.

## Section 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.
<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 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.

## Section 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>Materials to avoid</b>	None known

## Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### Exposure Limits

<b>Engineering measures</b>	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.
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### Personal protective equipment

<b>Respiratory Protection</b>	The product does not automatically present an airborne exposure concern during normal handling. In the event of an accidental discharge of the material which produces a heavy vapour or mist, workers should put on officially approved respiratory protection equipment with a universal filter type including particle filter.
<b>Hand Protection</b>	Wear chemical protective gloves made of materials such as nitrile or neoprene.

<b>Eye/Face Protection</b>	For dust, splash, mist or spray exposure, wear chemical protective goggles.
<b>Skin and Body Protection</b>	Minimize skin contamination by following good industrial hygiene practices. Wear suitable protective clothing. Protective shoes or boots.
<b>Hygiene measures</b>	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.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State</b>	Liquid
<b>Appearance</b>	Brown Liquid
<b>Odor</b>	Slight Aromatic
<b>Color</b>	Brown
<b>Odor threshold</b>	No information available
<b>pH</b>	6.5 @ 20°C
<b>Melting point/freezing point</b>	No information available
<b>Boiling Point/Range</b>	No information available
<b>Flash point</b>	> 94 °C / > 201 °F Tag Closed Cup
<b>Evaporation Rate</b>	No information available
<b>Flammability (solid, gas)</b>	Not flammable
<b>Flammability Limit in Air</b>	
Upper flammability limit:	No information available
Lower flammability limit:	No information available
<b>Vapor pressure</b>	No information available
<b>Vapor density</b>	No information available
<b>Specific gravity</b>	No information available
<b>Water solubility</b>	Dispersible in water
<b>Solubility(ies)</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>	417-430 cps @ 23° C
<b>Explosive properties</b>	Not explosive
<b>Relative density</b>	9.59 lb/gal
<b>Bulk density</b>	No information available

## Section 10: STABILITY AND REACTIVITY

<b>Reactivity</b>	Not applicable
<b>Stability</b>	Stable under recommended storage conditions
<b>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 products</b>	None known.
<b>Hazardous Decomposition Products</b>	Carbon oxides (COx), Nitrogen oxides (NOx), Chlorine, Hydrogen chloride.

## Section 11: TOXICOLOGICAL INFORMATION

### Acute toxicity

### Product Information

**Numerical measures of toxicity - Product Information**

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

Skin corrosion/irritation Non-irritating.  
 Serious eye damage/eye irritation Non-irritating.  
 Sensitization Did not cause sensitization on laboratory animals. (mouse).

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

Mutagenicity Clomazone: Not genotoxic in animal studies.  
 Carcinogenicity Clomazone: No evidence of carcinogenicity from animal studies.  
 Reproductive toxicity Clomazone: No toxicity to reproduction in animal studies.  
 Developmental toxicity Clomazone: Not teratogenic in animal studies.  
 STOT - single exposure None under normal use conditions.  
 STOT - repeated exposure None under normal use conditions.  
 Chronic toxicity Clomazone: Long-term exposure caused slight liver weight increase and hepatocyte enlargement in animal studies.  
 Target organ effects Clomazone: Liver.  
 Neurological effects Clomazone: Not neurotoxic.  
 Symptoms Large dosages of clomazone ingested by laboratory animals produced signs of toxicity including ataxia, decreased activity, oral discharge, lacrimation, bloody tears, and nasal discharge.  
 Aspiration hazard No information available.

## Section 12: ECOLOGICAL INFORMATION

**Ecotoxicity**

Very toxic to aquatic life with long lasting effects.

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

**Birds:** Quail LD50 (7d) >2000 mg/kg

**Daphnia:** Water Flea EC50 (48 h) = 491.3 mg/L

**Bees:** LD50 (48 h), contact >277.8 µg/bees

**Fish:** Rainbow trout LC50 (96 h) = 592.7 mg/L

**Algae:** EC50 (72 h) = 168.19 mg/L  
 EC50 (96 h) = 160.85 mg/L

**Earthworms:** Eisenia foetida LC50 (14 d) = 4830.2 mg/kg

**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.

**Other Adverse Effects** No information available.

## Section 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.

## Section 14: TRANSPORT INFORMATION

### IMDG/IMO

UN/ID no	UN3082
Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s. Clomazone
Hazard class	9
Packing Group	III
EmS No.	F-A, S-F
Marine Pollutant	Yes

### ICAO/IATA

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

## Section 15: REGULATORY INFORMATION

### International Inventories

A food, food additive, drug, cosmetic, or device, when manufactured, processed or distributed in commerce for use as a food, food additive, drug, cosmetic, or device may not be subject to local notification requirements. Check local regulations for more information.

Chemical name	TSCA (United States)	DSL (Canada)	EINECS/ELINCS (Europe)	ENCS (Japan)	China (IECSC)	KECL (Korea)	PICCS (Philippines)	AICS (Australia)
Clomazone 81777-89-1					X	X		
Sodium Nitrate 7631-99-4	X	X	X	X	X	X	X	X
Calcium chloride 10043-52-4	X	X	X	X	X	X	X	X
1,6-hexanediamine (70%) 124-09-4	X	X	X	X	X	X	X	X

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

**Section 16: OTHER INFORMATION**

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**Revision note** SDS sections updated.

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**End of Safety Data Sheet**