SAFETY DATA SHEET

Command 3 ME Microencapsulated Herbicide

This safety data sheet complies with the requirements of:
Regulation (EC) No. 453/2010 and Regulation (EC) No. 1272/2008

SDS # : 1693-A
Revision date: 2019-03-07
Format: EU
Version 1

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product Code(s) 1693-A

Product Name Command 3 ME Microencapsulated Herbicide

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)

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended Use: Herbicide

Restrictions on Use: Use as recommended by the label.

1.3. Details of the supplier of the safety data sheet

For further information, please contact:

Contact point (+45) 97 83 53 53 (24 h; for emergencies only)

1.4. Emergency telephone number

Emergency telephone Medical emergencies:

Austria: +43 1 406 43 43
Belgium: +32 70 245 245
Bulgaria: +359 2 9154 409
Cyprus: 1401
Czech Republic: +420 224 919 293, +420 224 915 402
Denmark: +45 82 12 12 12
France: +33 (0) 1 45 42 59 59
Finland: +358 9 471 977
Greece: 30 210 77 93 777
Hungary: +36 80 20 11 99
Ireland (Republic): +352 1 809 2166
Italy: +39 02 6610 1029
Lithuania: +370 523 62052, +370 687 53378
Luxembourg: +352 8002 5500
Netherlands: +31 30 274 88 88
Norway: +47 22 591300
Poland: +48 22 619 66 54, +48 22 619 08 97
Portugal: 808 250 143 (in Portugal only), +351 21 330 3284
Romania: +40 21318 3606
Slovakia: +421 2 54 77 4 166
Slovenia: +386 41 650 500
Spain: +34 91 562 04 20
Sweden: +46 08-331231112
Switzerland: 145
United Kingdom: 0870 600 6266 (in the UK only)
U.S.A. & Canada: +1 800 / 331-3148

All other countries: +1 651 / 632-6793 (Collect)

Section 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture *Regulation (EC) No 1272/2008*

Chronic aquatic toxicity	Category 1

2.2. Label elements

Hazard pictograms

Signal Word
WARNING

Hazard Statements
H410 - Very toxic to aquatic life with long lasting effects
EUH401 - To avoid risks to human health and the environment, comply with the instructions for use

Precautionary Statements
P273 - Avoid release to the environment
P391 - Collect spillage
P501 - Dispose of contents/container to an approved waste disposal plant

2.3. Other hazards
None of the ingredients in the product meets the criteria for being PBT or vPvB.

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

The product is a mixture, not a substance.

Chemical name	EC-No	CAS-No	Weight %	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH registration number
Clomazone	617-258-0	81777-89-1	31	Acute Tox. 4 (H302) Acute Tox. 4 (H332) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	No data available
Sodium Nitrate	231-554-3	7631-99-4	1-5	Ox. Sol. 3, Eye Irrit. 2 (H319)	No data available
Calcium chloride	233-140-8	10043-52-4	1-5	Eye Irrit. 2 (H319)	01-2119494219-28
1,6-hexanediamine (70%)	124-09-4	124-09-4	1-5	Acute Tox. 4 (H302) Acute Tox. 4 (H312) Skin Corr. 1B (H314) STOT SE 3 (H335)	No data available

Additional Information
For the full text of the H- and EUH- phrases mentioned in this Section, see Section 16

Section 4: FIRST AID MEASURES

4.1. Description of 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, 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.

4.2. Most important symptoms and effects, both acute and delayed

Most important symptoms and effects, both acute and delayed	Symptoms of overexposure include decreased activity, tearing eyes, bleeding from the nose and incoordination.

4.3. Indication of any immediate medical attention and special treatment needed

Indication of immediate medical attention and special treatment needed, if necessary	Notes to physician: A specific antidote for exposure to this material is not known. Gastric lavage and/or the administration of activated charcoal can be considered. After decontamination, treatment should be directed at the control of symptoms and the clinical condition.

Section 5: FIRE FIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media
Carbon dioxide (CO_2), Water spray, Foam, Dry chemical.

Unsuitable extinguishing media
High volume water jet

5.2. Special hazards arising from the substance or mixture
Thermal decomposition can lead to release of irritating gases and vapors.

5.3. Advice for firefighters
Wear self-contained breathing apparatus and protective suit. Prevent fire extinguishing water from contaminating surface water or the groundwater system. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal Precautions
It is recommended to have a predetermined plan for the handling of spills. Empty, closable vessels for the collection of spills should be available.

In case of large spill (involving 10 tonnes of the product or more):

Observe all safety precautions when cleaning up spills. Use personal protection equipment. Depending on the magnitude of the spill this may mean wearing respirator, face mask or eye protection, chemical resistant clothing, gloves and rubber boots. Stop the source of the spill immediately if safe to do so. Keep unprotected persons away from the spill area.

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

For emergency responders
Use personal protection recommended in Section 8.

6.2. Environmental precautions
Contain the spill to prevent any further contamination of surface, soil or water. Wash waters must be prevented from entering surface water drains. Uncontrolled discharge into water courses must be alerted to the appropriate regulatory body.

6.3. Methods and material for containment and cleaning up

Methods for Containment	It is recommended to consider possibilities to prevent damaging effects of spills, such as bunding or capping. Use non-sparking tools and equipment. If appropriate, surface water drains should be covered. Minor spills on the floor or other impervious surface should immediately be swept up or preferably vacuumed up using equipment with high efficiency final filter. Transfer to suitable containers. Clean area with detergent and much water. Absorb wash liquid onto inert absorbent such as universal binder, Fuller's earth, bentonite or other absorbent clay and collect in suitable containers. The used containers should be properly closed and labelled.
Methods for cleaning up	If appropriate, surface water drains should be covered. Minor spills on the floor or other impervious surface should be swept up or preferably vacuumed up using equipment with high efficiency final filter. Transfer to suitable containers. Clean area with damp cloth and/or strong industrial detergent with much water. Absorb wash liquid onto a suitable absorbent such as universal binder, attapulgite, bentonite or other absorbent clays and transfer contaminated absorbent to suitable containers. The used containers should be properly closed and labelled. spills which soak into the ground should be dug up and transferred to suitable containers. in water should be contained as much as possible by isolation of the contaminated water. The contaminated water must be collected and removed for treatment or disposal.

6.4. Reference to other sections
See section 8 for more information. See section 13 for more information.

Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Handling
In an industrial environment it is recommended to avoid all personal contact with the product, if possible by using closed systems with remote system control. Otherwise it is recommended to handle the material by mechanical means as much as possible. Adequate ventilation or local exhaust ventilation is required. The exhaust gases should be filtered or treated otherwise. For personal protection in this situation, see section 8. For its use as a pesticide, first look for precautions and personal protection measures on the officially approved label on the packaging or for other official guidance or policy in force. If these are lacking, see section 8. Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use.

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.

7.2. Conditions for safe storage, including any incompatibilities

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.

7.3. Specific end use(s)

Risk Management Methods (RMM)
The information required is contained in this Safety Data Sheet.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

To our knowledge, personal exposure limits have not been established for the active ingredient in this product.

Chemical name	European Union	The United Kingdom	France	Spain	Germany
1,6-hexanediamine (70%) 124-09-4	-	-	-	TWA 0.5 ppm TWA 2.4 mg/m³	-
Chemical name	**Italy**	**Portugal**	**The Netherlands**	**Finland**	**Denmark**
1,6-hexanediamine (70%) 124-09-4	-	TWA 0.5 ppm	-	-	TWA 0.5 ppm TWA 2.3 mg/m³
Chemical name	**Austria**	**Switzerland**	**Poland**	**Norway**	**Ireland**
1,6-hexanediamine (70%) 124-09-4	H* TWA 0.5 ppm TWA 2.3 mg/m³	-	-	Ceiling 0.5 ppm Ceiling 1 mg/m³ S*	TWA 0.5 ppm TWA 2.3 mg/m³ STEL 1.5 ppm STEL 6.9 mg/m³

Derived No Effect Level (DNEL) Clomazone: 0.133 mg/kg bw/day.

Predicted No Effect Concentration (PNEC) Clomazone.

Freshwater 0.22 mg/l

8.2. 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

Eye/Face Protection For dust, splash, mist or spray exposure, wear chemical protective goggles. Maintain eye wash fountain and quick-drench facilities in work area.

Hand Protection Wear chemical protective gloves made of materials such as nitrile or neoprene.

Skin and Body Protection Wear appropriate chemical resistant clothing to prevent skin contact depending on the extent of exposure. During most normal work situations where exposure to the material cannot be avoided for a limited time span, waterproof pants and apron of chemical resistant material or coveralls of polyethylene (PE) will be sufficient. Coveralls of PE must be discarded after use if contaminated. In cases of appreciable or prolonged exposure, coveralls of barrier laminate may be required.

Respiratory Protection 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.

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

Environmental exposure controls Do not release to the environment.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical State	Liquid
Appearance	Brown Liquid
Odor	Slight Aromatic
Color	Brown
Odor threshold	No information available
pH	6.5 @ 20°C
Melting point/freezing point	No information available
Boiling Point/Range	No information available
Flash point	> 94 °C / > 201 °F Tag Closed Cup

Evaporation Rate	No information available
Flammability (solid, gas)	
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
Specific gravity	No information available
Water solubility	Dispersible in water
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	417-430 cps
@ 23° C	
Explosive properties	Not explosive
Oxidizing properties	No information available

9.2. Other information

Softening point	No information available
Molecular weight	No information available
VOC content (%)	No information available
Relative density	9.59
Bulk density	No information available
K_{st}	No information available

Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

None under normal use conditions

10.2. Chemical stability

Stable under recommended storage conditions.

Explosion data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

10.3. Possibility of hazardous reactions

Hazardous polymerization
Hazardous polymerization does not occur.

Hazardous reactions
None under normal processing.

10.4. Conditions to avoid

Heat, flames and sparks.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

Carbon oxides (COx), Nitrogen oxides (NOx), Chlorine, Hydrogen chloride.

Section 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute 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)

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Sodium Nitrate	= 1267 mg/kg (Rat)		
Calcium chloride	= 1000 mg/kg (Rat)	> 5000 mg/kg (Rabbit)	
1,6-hexanediamine (70%)	= 750 mg/kg (Rat)	= 1110 mg/kg (Rabbit)	

Skin corrosion/irritation Non-irritating.
Serious eye damage/eye irritation Non-irritating.
Sensitization Did not cause sensitization on laboratory animals (mouse)
Chronic toxicity Clomazone: Long-term exposure caused slight liver weight increase and hepatocyte enlargement in animal studies.

Mutagenicity Clomazone: Not genotoxic in animal studies.

Carcinogenicity No information available.

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.
Neurological effects Clomazone: Not neurotoxic.

Target organ effects Clomazone: Liver,

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

12.1. Toxicity

Ecotoxicity The ecotoxicity of the product is measured as:

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

.

Clomazone (81777-89-1)				
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

12.2. Persistence and degradability

Clomazone: Moderately persistent. Does not readily hydrolyze. Not readily biodegradable.

12.3. Bioaccumulative potential

Clomazone: The substance does not have a potential for bioconcentration.

12.4. Mobility in soil

Mobility in soil
No information available.

Mobility
Clomazone: Moderately mobile. Has some potential to reach groundwater.

12.5. Results of PBT and vPvB assessment

None of the ingredients in the product meets the criteria for being PBT or vPvB.

12.6. Other adverse effects

No information available

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from residues / unused products

Remaining quantities of the material and empty but unclean packaging should be regarded as hazardous waste. Dispose of as hazardous waste in compliance with local and national regulations. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

Contaminated Packaging

Containers must be disposed of in accordance with local, state and federal regulations. Refer to the product label for container disposal instructions. It is recommended to consider possible ways of disposal in the following order:

1. Reuse or recycling should first be considered. Reuse is prohibited except by the authorisation holder. If offered for recycling, containers must be emptied and triply rinsed (or equivalent). Do not discharge rinsing water to sewer systems.

2. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

3. Delivery of the packaging to a licensed service for disposal of hazardous waste.

4. Disposal in a landfill or burning in open air should only occur as a last resort. For disposal in a landfill containers should be emptied completely, rinsed and punctured to make them unusable for other purposes. If burned, stay out of smoke.

Section 14: TRANSPORT INFORMATION

IMDG/IMO

14.1 UN/ID no	UN3082
14.2 Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s, (Clomazone)
14.3 Hazard class	9
14.4 Packing Group	III
14.5 Marine Pollutant	Yes
Environmental Hazard	Yes
14.6 Special Provisions	Do not release to the environment
EmS No.	F-A, S-F
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	No information available

RID

14.1 UN/ID no	UN3082
14.2 Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s. (Clomazone)
14.3 Hazard class	9
14.4 Packing Group	III
14.5 Environmental Hazard	Yes
14.6 Special Provisions	Do not release to the environment

ADR/RID

14.1 UN/ID no	UN3082
14.2 Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s. (Clomazone)
14.3 Hazard class	9
14.4 Packing Group	III
14.5 Environmental Hazard	Yes
14.6 Special Provisions	Do not release to the environment

ICAO/IATA

14.1 UN/ID no	UN3082
14.2 Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s, (Clomazone)
14.3 Hazard class	9
14.4 Packing Group	III
14.5 Environmental Hazard	Yes
14.6 Special Provisions	Do not release to the environment

Section 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

European Union

Authorizations and/or restrictions on use:
This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV)
This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Persistent Organic Pollutants
Not Applicable

Dangerous substance category per Seveso Directive (2012/18/EU)
DANGEROUS FOR THE ENVIRONMENT

Ozone-depleting substances (ODS) regulation (EC) 1005/2009
Not Applicable

International Inventories

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

15.2. Chemical safety assessment

A chemical safety assessment is not required to be included for this product.

Section 16: OTHER INFORMATION

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under sections 2 and 3
H302 - Harmful if swallowed
H332 - Harmful if inhaled
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects
H319 - Causes serious eye irritation
H312 - Harmful in contact with skin
H314 - Causes severe skin burns and eye damage
H335 - May cause respiratory irritation

Legend

ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road
CAS:	CAS (Chemical Abstracts Service)
Ceiling:	Maximum limit value:
DNEL:	Derived No Effect Level (DNEL)
EINECS:	EINECS (European Inventory of Existing Chemical Substances)
GHS:	Globally Harmonized System (GHS)
IATA:	International Air Transport Association (IATA)
ICAO:	International Civil Aviation Organization
IMDG:	International Maritime Dangerous Goods (IMDG)
LC50:	LC50 (lethal concentration)
LD50:	LD50 (lethal dose)
PBT:	Persistent, Bioaccumulative, and Toxic (PBT) Chemicals
RID:	Regulations Concerning the International Transport of Dangerous Goods by Rail
STEL:	Short term exposure limit
SVHC	SVHC: Substances of Very High Concern for Authorization:
TWA:	time weighted average
vPvB:	very Persistent and very Bioaccumulative

Classification procedure
Calculation method

Revision date:	2019-03-07
Reason for revision:	SDS sections updated.
Training Advice	This material should only be used by persons who are made aware of its hazardous properties and have been instructed in the required safety precautions.

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End of Safety Data Sheet