



SAFETY DATA SHEET

Bestox 50 EC

SDS # : FO003487-A
Revision date: 2018-07-17
Format: AP
Version 5.01

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name	Bestox 50 EC
Product Code(s)	FO003487-A
Synonyms	FMC 65318: A racemate comprising (S)- α -cyano-3-phenoxybenzyl (1R,3R)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate and (R)- α -cyano-3-phenoxybenzyl (1S,3S)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate: [1 α (S*),3 α](\pm)-cyano(3-phenoxyphenyl)methyl 3-(2,2-dichloroethenyl)-2,2-dimethylcyclopropanecarboxylate
Active Ingredient(s)	Alpha-cypermethrin
Chemical Family	Pyrethroid Pesticide
Recommended Use:	Insecticide.
Restrictions on Use:	Use as recommended by the label.
Manufacturer/Supplier	FMC Corporation Agricultural Solutions 2929 Walnut Street Philadelphia, PA 19104 General Information: Phone: (215) 299-6000 E-Mail: msdsinfo@fmc.com Telephone: 86 21 20675888 Telefax: 86 21 20675858
Emergency telephone	86 532 8388 9090

Section 2: HAZARDS IDENTIFICATION

GHS - Classification

Aspiration toxicity	Category 1
Acute toxicity - Oral	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 2
Serious eye damage/eye irritation	Category 2A
STOT - single exposure	Category 3
Specific target organ toxicity (repeated exposure)	Category 2
Acute aquatic toxicity	Category 1
Chronic aquatic toxicity	Category 1

Flammable liquids	Category 3
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Label Elements



Signal Word

Danger

Hazard Statements

H302 - Harmful if swallowed
 H304 - May be fatal if swallowed and enters airways
 H319 - Causes serious eye irritation
 H330 - Fatal if inhaled
 H373 - May cause damage to organs through prolonged or repeated exposure
 H410 - Very toxic to aquatic life with long lasting effects
 H335 - May cause respiratory irritation
 H336 - May cause drowsiness or dizziness
 H226 - Flammable liquid and vapor

Precautionary Statements - Prevention

P202 - Do not handle until all safety precautions have been read and understood
 P281 - Use personal protective equipment as required
 P264 - Wash face, hands and any exposed skin thoroughly after handling
 P270 - Do not eat, drink or smoke when using this product
 P260 - Do not breathe dust/fume/gas/mist/vapors/spray
 P271 - Use only outdoors or in a well-ventilated area
 P273 - Avoid release to the environment
 P210 - Keep away from heat/sparks/open flames/hot surfaces. No smoking
 P233 - Keep container tightly closed
 P240 - Ground/bond container and receiving equipment
 P241 - Use explosion-proof electrical/ventilating/lighting/./equipment
 P242 - Use only non-sparking tools
 P243 - Take precautionary measures against static discharge
 P235 - Keep cool

Precautionary Statements - Response

P308 + P313 - If exposed or concerned: Get medical advice/attention
 P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
 P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 P337 + P313 - If eye irritation persists: Get medical advice/ attention
 P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor
 P331 - Do NOT induce vomiting
 P330 - Rinse mouth
 P370 + P378 - In case of fire: Use Carbon dioxide (CO2), Dry chemical, Alcohol-resistant foam, Water spray for extinction
 P391 - Collect spillage

Precautionary Statements - Storage

P405 - Store locked up
 P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal

P501 - Dispose of contents/container according to label directions

Other Information

May be fatal if swallowed and enters airways Very toxic to aquatic life with long lasting effects

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms FMC 65318: A racemate comprising (S)- α -cyano-3-phenoxybenzyl (1R,3R)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate and (R)- α -cyano-3-phenoxybenzyl (1S,3S)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate: [1 α (S*),3 α](\pm)-cyano(3-phenoxyphenyl)methyl 3-(2,2-dichloroethenyl)-2,2-dimethylcyclopropanecarboxylate

Chemical name	CAS-No	Weight %
Alpha-cypermethrin	67375-30-8	5.6
Petroleum naphtha, light aromatic	64742-95-6	80 - 90

Section 4: FIRST AID MEASURES

Inhalation	Move to fresh air. If breathing is difficult or if discomfort occurs and persists, obtain medical attention.
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	Central nervous system effects.
Protection of first-aiders	Use personal protective equipment. See Section 8 for more detail.
Indication of immediate medical attention and special treatment needed, if necessary	This product contains a pyrethroid. If large amounts have been ingested, the stomach and intestines should be evacuated. Treatment is symptomatic and supportive. Digestible fats, oils, or alcohol may increase absorption and so should be avoided.

Section 5: FIRE FIGHTING MEASURES

Flammable properties	Moderately combustible. The product may form flammable mixtures with air when heated above the flash point.
Suitable Extinguishing Media	Foam, Dry chemical or CO ₂ . Soft stream or water fog only if necessary. Contain all runoff.
Unsuitable extinguishing media	No information available
Specific Hazards Arising from the Chemical	Keep product and empty container away from heat and sources of ignition.
Protective equipment and precautions for firefighters	As in any fire, wear self-contained breathing apparatus and full protective gear. Isolate fire area. Evaluate upwind. Do not breathe smoke, vapors or gases generated

Section 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions	Isolate and post spill area. Wear protective gloves/clothing 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 material out of lakes, streams, ponds, and sewer drains. Keep people and animals away from and upwind of spill/leak.
Methods for Containment	Dike to confine spill and absorb with non-combustible absorbent such as clay, sand or soil. Vacuum, shovel or pump waste into a drum and label contents for disposal.
Methods for cleaning up	To clean or neutralize spill area, tools and equipment, wash with a suitable solution of caustic or soda ash and an appropriate alcohol such as ethanol, methanol or isopropanol. Follow this by washing with a strong soap and water solution. Absorb, as above, any excess liquid and add to the drums of waste already collected. Dispose of waste as indicated in Section 13.

Section 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.
Materials to avoid	Strong oxidizing agents, Strong acids, Strong bases.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits

Engineering measures	Ensure adequate ventilation, especially in confined areas. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. Ventilate all transport vehicles prior to unloading.
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Personal protective equipment

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.
Hand Protection	Wear chemical protective gloves made of materials such as nitrile or neoprene.
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.
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 and gloves, including the inside, before re-use. Launder work clothing separately from regular household laundry.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Amber Liquid
Odor	Aromatic hydrocarbon
Color	Amber
Odor threshold	No information available
pH	4.06 (5% water)
Melting point/freezing point	No information available
Boiling Point/Range	No information available
Flash point	57 °C

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
Vapor density	No information available
Specific gravity	0.9224
Water solubility	Emulsifies
Solubility(ies)	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	No information available
Density	No information available
Bulk density	7.7

Section 10: STABILITY AND REACTIVITY

Reactivity	Not applicable
Stability	Stable under recommended storage conditions
Hazardous reactions	None under normal processing.
Hazardous polymerization	Hazardous polymerization does not occur.
Conditions to Avoid	Excessive heat.
Incompatible products	Strong oxidizing agents, Strong acids, Strong bases.
Hazardous Decomposition Products	Carbon monoxide (CO), Carbon dioxide (CO ₂), Hydrogen chloride, hydrogen cyanide.

Section 11: TOXICOLOGICAL INFORMATION

Acute toxicity

Numerical measures of toxicity - Product Information

LD50 Oral	: Similar formulation 942 mg/kg (rat)
LD50 Dermal	: Similar formulation > 2,000 mg/kg (rabbit)
LC50 Inhalation	: Similar formulation 0.2 mg/L (rat)

Skin corrosion/irritation	Moderately irritating (rabbit).
Serious eye damage/eye irritation	Moderately irritating (rabbit).
Sensitization	Non-sensitizer.

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

Mutagenicity	Alpha-cypermethrin: Not genotoxic in laboratory studies.
Carcinogenicity	Cypermethrin caused an increase in benign lung tumors in mice, but not in rats. EPA has classified cypermethrin as a possible human carcinogen based on this information, but does not regulate based on its low cancer risk.
Reproductive toxicity	Alpha-cypermethrin: No toxicity to reproduction in animal studies.
Developmental toxicity	Alpha-cypermethrin: Not teratogenic in animal studies.
STOT - single exposure	May cause respiratory irritation. See listed target organs below.
STOT - repeated exposure	May cause damage to organs through prolonged or repeated exposure. See listed target

Chronic toxicity	organs below. Alpha-cypermethrin: Long-term exposure caused neurotoxicity (body tremors, irregular gait, excessive salivation), decreased body weight gains and increased liver weights.
Target organ effects	Central Nervous System,
Neurological effects	Alpha-cypermethrin: Causes clinical signs of neurotoxicity (body tremors, irregular gait, excessive salivation) following acute, subchronic or chronic exposure.
Aspiration hazard	No information available.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity

Very toxic to aquatic life with long lasting effects.

Alpha-cypermethrin (67375-30-8)				
Active Ingredient(s)	Duration	Species	Value	Units
Alpha-cypermethrin	48 h EC50	Crustacea	0.0003	mg/L
	96 h LC50	Fish	0.0028	mg/L
	72 h EC50	Algae	0.1	mg/L
	21 d NOEC	Crustacea	0.03	µg/L
	21 d NOEC	Fish	0.03	µg/L

Persistence and degradability	Alpha-cypermethrin: Moderately persistent. Does not readily hydrolyze. Not readily biodegradable.
Bioaccumulation	Alpha-cypermethrin: The substance has a potential for bioconcentration.
Mobility	Alpha-cypermethrin: Immobile; Not expected 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.
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	UN1993
Proper Shipping Name	Flammable liquid, n.o.s
Hazard class	3
Packing Group	III
EmS No.	F-E, S-E
Marine Pollutant	Alpha-cypermethrin

ICAO/IATA

UN/ID no UN1993
 Proper Shipping Name Flammable liquid, n.o.s
 Hazard class 3
 Packing Group III
 Marine Pollutant Alpha-cypermethrin

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)
Alpha-cypermethrin 67375-30-8					X	X	X	
Petroleum naphtha, light aromatic 64742-95-6	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 (M)SDS sections updated.

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End of Safety Data Sheet