



SAFETY DATA SHEET

Zeta 15 UL

SDS #: FO003466-A
Revision date: 2021-10-27
Format: AP
Version 2

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name	Zeta 15 UL
Product Code(s)	FO003466-A
Synonyms	ZETA-CYPERMETHRIN: (S)-cyano(3-phenoxyphenyl)methyl 3-(2,2-dichloroethenyl)-2,2-dimethylcyclopropanecarboxylate (CAS name); mix of (S)- α -cyano-3-phenoxybenzyl (1RS,3RS;1RS,3SR)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate (IUPAC name)
Active Ingredient(s)	Zeta-cypermethrin
Chemical Family	Pyrethroid Pesticide
Recommended Use:	Insecticide
Restrictions on Use:	Use as recommended by the label.
Manufacturer/Supplier	FMC Corporation 2929 Walnut Street Philadelphia, PA 19104 (215) 299-6000 (General Information) SDS-Info@fmc.com (E-Mail General Information)
Emergency telephone	Medical Emergencies: 0800 140 1447 For leak, fire, spill or accidents: 001-803-017-9114 (CHEMTREC Indonesia) 1 703 741-5970 (CHEMTREC – International)

Section 2: HAZARDS IDENTIFICATION

GHS Classification

Aspiration toxicity	Category 1
Acute toxicity - Dermal	Category 5
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin sensitization	Category 1
Carcinogenicity	Category 2
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 4
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Label Elements



Signal Word: Danger

Hazard Statements

H304 - May be fatal if swallowed and enters airways
 H313 - May be harmful in contact with skin
 H317 - May cause an allergic skin reaction
 H332 - Harmful if inhaled
 H351 - Suspected of causing cancer
 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
 H227 - Combustible liquid

Precautionary Statements - Prevention

P202 - Do not handle until all safety precautions have been read and understood
 P281 - Use personal protective equipment as required
 P271 - Use only outdoors or in a well-ventilated area
 P272 - Contaminated work clothing should not be allowed out of the workplace
 P280 - Wear protective gloves
 P260 - Do not breathe dust/fume/gas/mist/vapors/spray
 P273 - Avoid release to the environment
 P210 - Keep away from heat/sparks/open flames/hot surfaces. No smoking
 P235 - Keep cool

Precautionary Statements - Response

P308 + P313 - If exposed or concerned: Get medical advice/attention
 P321 - Specific treatment (see supplemental first aid instructions on this label)
 P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
 P302 + P352 - IF ON SKIN: Wash with plenty of water and soap
 P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention
 P363 - Wash contaminated clothing before reuse
 P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor
 P331 - Do NOT induce vomiting
 P370 + P378 - In case of fire: Use CO₂, dry chemical, or foam 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 to an approved waste disposal plant

Other Information

May be fatal if swallowed and enters airways

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms ZETA-CYPERMETHRIN: (S)-cyano(3-phenoxyphenyl)methyl 3-(2,2-dichloroethenyl)-2,2-dimethylcyclopropanecarboxylate (CAS name); mix of (S)-α-cyano-3-phenoxybenzyl (1RS,3RS;1RS,3SR)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate (IUPAC name)

Chemical name	CAS-No	Weight %
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Zeta-cypermethrin (F2700)	52315-07-8	1.69
Naphtha (petroleum), heavy aromatic	64742-94-5	10 - 40
Paraffins oils	8012-95-1	60-70
Naphthalene*	91-20-3	1 - 5

Section 4: FIRST AID MEASURES

Inhalation	Move to fresh air. If person is not breathing, call 911 or an ambulance, 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 physician or poison control center immediately. 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.

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.
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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 CO2. 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.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions	Isolate and post spill area. Wear suitable protective clothing, gloves 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.
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 and neutralize a contaminated area, scrub area with a solution of detergent (e.g. commercial product such as SuperSoap™, Tide®, Spic and Span®, or other high pH

detergent) and water. Let solution sit for 5 minutes. Use a stiff brush to scrub affected area. Repeat if necessary to remove visible staining. Additional decontamination can be made by applying bleach (Clorox® or equivalent) to affected area. 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	Handle in accordance with good industrial hygiene and safety practice. 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 at temperatures below .?°C. Do not use or store near heat or open flame. Store in original container. Keep out of reach of children and animals.
Materials to avoid	None known

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits

Component	China	Japan	Korea	Australia	Taiwan
Paraffins oils 8012-95-1 (60-70)		OEL: 3 mg/m ³ C1		TWA 5 mg/m ³	STEL 10 mg/m ³
Naphthalene* 91-20-3 (1 - 5)	TWA: 50 mg/m ³ STEL: 75 mg/m ³ S* C1 C3	C2B ISHL/ACL: 10 ppm	S* STEL: 15 ppm TWA: 10 ppm	STEL 15 ppm STEL 79 mg/m ³ TWA 10 ppm TWA 52 mg/m ³	STEL 15 ppm STEL 78 mg/m ³

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

Respiratory Protection For dust, splash, mist or spray exposures wear a elastomeric full-face or half mask respirator with appropriate cartridges and/or filters which is approved for pesticides (U.S. NIOSH/MSHA, EU CEN or comparable certification organization).

Hand Protection Use protective gloves made of chemical materials such as nitrile or neoprene. Wash the outside of gloves with soap and water before reuse. Check regularly for leaks.

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 before re-use. Launder work clothing separately from regular household laundry.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Light yellow Liquid
Odor	Aromatic hydrocarbon
Color	Light yellow
Odor threshold	No information available
pH	No information available
Melting point/freezing point	No information available
Boiling Point/Range	No information available
Flash point	67 °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	No information available
Water solubility	No information available
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
Molecular weight	416.3 (zeta-cypermethrin)
Relative density	0.8819 g/cm ³ @ 20°C
Bulk density	No information available
K _{st}	>0 bar m/s

Section 10: STABILITY AND REACTIVITY

Reactivity	Not applicable
Stability	Stable
Hazardous reactions	None under normal processing.
Hazardous polymerization	Hazardous polymerization does not occur.
Conditions to Avoid	Excessive heat.
Incompatible products	No information available.
Hazardous Decomposition Products	Carbon monoxide (CO), Carbon dioxide (CO ₂), Hydrogen cyanide, Chlorine, Hydrogen chloride:

Section 11: TOXICOLOGICAL INFORMATION

Acute toxicity

Numerical measures of toxicity - Product Information

LD50 Oral	: > 6,880 mg/kg (rat)
LD50 Dermal	: > 2,150 mg/kg (rat)
LC50 Inhalation (dust)	: Similar product (5163): 2.5 (4h) (rat)

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation (vapor)
Naphtha (petroleum), heavy aromatic (64742-94-5)	300-2000 mg/kg	> 2 mL/kg (Nyúl)	>5,2 mg/L
Paraffins oils (8012-95-1)	> 24 g/kg (Rat)		= 2062 ppm (Rat) 4 h
Naphthalene* (91-20-3)	= 1110 mg/kg (Rat) = 490 mg/kg (Rat)	= 1120 mg/kg (Rabbit) > 20 g/kg (Rabbit)	> 340 mg/m ³ (Rat) 1 h
1,2,4-Trimethylbenzene (95-63-6)	= 3280 mg/kg (Rat)	> 3160 mg/kg (Rabbit)	= 18 g/m ³ (Rat) 4 h

Skin corrosion/irritation	Mildly irritating.
Serious eye damage/eye irritation	Mildly irritating.
Sensitization	Mild sensitizer.

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

Mutagenicity	Zeta-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	Zeta-cypermethrin: No toxicity to reproduction in animal studies.
Developmental toxicity	Zeta-cypermethrin: Not teratogenic in animal studies.
STOT - single exposure	May cause damage to organs. See listed target organs below.
STOT - repeated exposure	May cause damage to organs through prolonged or repeated exposure. See listed target organs below.
Chronic toxicity	Zeta-cypermethrin: Long-term exposure caused neurotoxicity (body tremors, decreased motor activity), decreased body weight and increased liver weight.
Target organ effects	Zeta-cypermethrin: Central Nervous System,
Neurological effects	Zeta-cypermethrin: Causes neurotoxicity (tremors and decreased motor activity) following acute, subchronic or chronic exposure.
Aspiration hazard	No information available.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity

The environmental impact of this product has not been fully investigated.

Very toxic to aquatic life with long lasting effects.

Zeta-cypermethrin (F2700) (52315-07-8)				
Active Ingredient(s)	Duration	Species	Value	Units
Zeta-cypermethrin	48 h EC50	Crustacea	0.14	µg/L
	96 h LC50	Fish	0.69	µg/L
	72 h EC50	Algae	>1	mg/L
	21 d NOEC	Crustacea	0.01	µg/L
	21 d NOEC	Fish	0.015	µg/L

Persistence and degradability	Zeta-cypermethrin: Non-persistent. Readily hydrolyzed. Not readily biodegradable.
Bioaccumulation	Zeta-cypermethrin: The substance does not have a potential for bioconcentration.
Mobility	Zeta-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 containers and packages	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.(Zeta-cypermethrin)
 Hazard class 9
 Packing Group III
 EmS No. F-A, S-F
 Environmental Hazards Yes

ICAO/IATA

UN/ID no UN3082
 Proper Shipping Name Environmentally hazardous substance, liquid, n.o.s.(Zeta-cypermethrin)
 Hazard class 9
 Packing Group III
 Environmental Hazards 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)
Zeta-cypermethrin (F2700) 52315-07-8			X		X	X	X	X
Naphtha (petroleum), heavy aromatic 64742-94-5	X	X	X		X	X	X	X
Paraffins oils 8012-95-1	X	X	X		X	X	X	X
Naphthalene* 91-20-3	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

Prepared By: FMC Corporation

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Revision date: 2021-10-27

Revision note

SDS sections updated.

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End of Safety Data Sheet