

SAFETY DATA SHEET

Talstar® Xtra Granular Insecticide Featuring Verge Granule Technology

SDS #: 6676-A

Revision date: 2016-05-26

Format: NA

Version 1.03



1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name Talstar® Xtra Granular Insecticide Featuring Verge Granule Technology

Other means of identification

Product Code(s) 6676-A

Synonyms BIFENTHRIN: (2-methyl[1,1'-biphenyl]-3-yl)methyl
3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropanecarboxylate (CAS name);
2-methylbiphenyl-3-ylmethyl
(Z)-(1RS)-cis-3-(2-chloro-3,3,3-trifluoroprop-1-enyl)-2,2-dimethylcyclopropanecarboxylate
(IUPAC name);

ZETA-CYPERMETHRIN: (+/-)- α -cyano(3-phenoxyphenyl)methyl (+/-) cis,
trans-3-(2,2-dichloroethenyl)-2,2-dimethylcyclopropanecarboxylate (CAS name); (RS)- α -
cyano-3-phenoxybenzyl
(1RS)-cis-trans-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate (IUPAC name)

Active Ingredient(s) Bifenthrin, Zeta-cypermethrin

Chemical Family Pyrethroid Pesticide

Recommended use of the chemical and restrictions on use

Recommended Use: Insecticide

Restrictions on Use: Use as recommended by the label

Manufacturer Address

FMC Corporation
2929 Walnut Street
Philadelphia, PA 19104
(215) 299-6000 (General Information)
msdsinfo@fmc.com (E-Mail General Information)

Emergency telephone number

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

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)


Acute toxicity - Oral	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin sensitization	Category 1B
Carcinogenicity	Category 1A

GHS Label elements, including precautionary statements

EMERGENCY OVERVIEW

Danger

Hazard Statements
 H302 - Harmful if swallowed
 H317 - May cause an allergic skin reaction
 H332 - Harmful if inhaled
 H350 - May cause cancer



Precautionary Statements - Prevention

- P202 - Do not handle until all safety precautions have been read and understood
- P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
- P264 - Wash face, hands and any exposed skin thoroughly after handling
- P270 - Do not eat, drink or smoke when using this product
- P272 - Contaminated work clothing should not be allowed out of the workplace
- P280 - Wear protective gloves
- P281 - Use personal protective equipment as required

Precautionary Statements - Response

- P308 + P313 - If exposed or concerned: Get medical advice/attention
- 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
- P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
- P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell
- P330 - Rinse mouth

Precautionary Statements - Storage

- P405 - Store locked up

Precautionary Statements - Disposal

- P501 - Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

No hazards not otherwise classified were identified.

Other Information

Very toxic to aquatic life with long lasting effects.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Family Pyrethroid Pesticide.

Chemical name	CAS-No	Weight %
Bifenthrin	82657-04-3	0.2

Zeta-cypermethrin (F2700)	52315-07-8	0.05
bentonite	1302-78-9	80-90
Crystalline silica, quartz	14808-60-7	5-10
Hexylene Glycol	107-41-5	1-5

Synonyms are provided in Section 1.

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 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.
Most important symptoms and effects, both acute and delayed	Allergic skin reactions.
Indication of immediate medical attention and special treatment needed, if necessary	Treat symptomatically. This product is 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.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Foam. Carbon dioxide (CO ₂). Dry chemical. Water spray or fog.
Specific Hazards Arising from the Chemical	Powdered material may form explosive dust-air mixtures
Explosion data	
Sensitivity to Mechanical Impact	Not sensitive.
Sensitivity to Static Discharge	Not sensitive.
Protective equipment and precautions for firefighters	As in any fire, wear self-contained breathing apparatus and full protective gear. Isolate fire area. Evaluate downwind.

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 people and animals away from and upwind of spill/leak. Keep material out of lakes, streams, ponds, and sewer drains.
Methods for Containment	Sweep up and shovel into suitable containers for 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.

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.
Incompatible products	None known

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Control parameters**

Chemical name	ACGIH TLV	OSHA PEL	NIOSH	Mexico
bentonite (1302-78-9)	TWA: 1 mg/m ³	-	-	-
Crystalline silica, quartz (14808-60-7)	TWA: 0.025 mg/m ³	-	IDLH: 50 mg/m ³ TWA: 0.05 mg/m ³	Mexico: TWA 0.1 mg/m ³
Hexylene Glycol (107-41-5)	Ceiling: 25 ppm	-	Ceiling: 25 ppm Ceiling: 125 mg/m ³	Mexico: Ceiling 25 ppm Mexico: Ceiling 125 mg/m ³
Chemical name	British Columbia	Quebec	Ontario TWAEV	Alberta
bentonite (1302-78-9)	TWA: 1.0 mg/m ³	-	TWA: 1 mg/m ³ respirable	-
Crystalline silica, quartz (14808-60-7)	TWA: 0.025 mg/m ³	TWA: 0.1 mg/m ³	TWA: 0.10 mg/m ³ respirable	TWA: 0.025 mg/m ³
Hexylene Glycol (107-41-5)	Ceiling: 25 ppm	Ceiling: 25 ppm Ceiling: 121 mg/m ³	CEV: 25 ppm	Ceiling: 25 ppm Ceiling: 121 mg/m ³

Appropriate engineering controls

Engineering measures	Apply technical measures to comply with the occupational exposure limits. Ensure adequate ventilation, especially in confined areas. 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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Individual protection measures, such as personal protective equipment

Eye/Face Protection	If there is a potential for exposure to particles which could cause eye discomfort, wear chemical goggles.
Skin and Body Protection	Wear long-sleeved shirt, long pants, socks, and shoes.
Hand Protection	Protective gloves
Respiratory Protection	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Respiratory protection must be provided in accordance with current local regulations.
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.
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

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Granules
Physical State	Solid
Color	Gray
Odor	Mild detergent odor
Odor threshold	No information available
pH	7.33
Melting point/freezing point	Not applicable
Boiling Point/Range	No information available
Flash point	Not applicable
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
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	No information available
Explosive properties	No information available
Oxidizing properties	No information available
Molecular weight	No information available
Bulk density	55.43 lb/cu ft

10. STABILITY AND REACTIVITY

Reactivity	Not applicable
Chemical Stability	Stable under recommended storage conditions.
Possibility of Hazardous Reactions	None under normal processing.
Hazardous polymerization	Hazardous polymerization does not occur.
Conditions to avoid	Heat, flames and sparks
Incompatible materials	None known.
Hazardous Decomposition Products	None known based on information supplied.

11. TOXICOLOGICAL INFORMATION**Product Information**

LD50 Oral	550 mg/kg (rat)
LD50 Dermal	> 5000 mg/kg (rabbit)
LC50 Inhalation	> 2.11 mg/L (rat) 4 hr
Serious eye damage/eye irritation	Mildly irritating.
Skin corrosion/irritation	May cause slight irritation.
Sensitization	Sensitizer

Information on toxicological effects

Symptoms Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

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

Chronic toxicity Bifenthrin: Long-term exposure caused neurotoxicity (tremors and impaired gait) in the early exposure in animal studies, but tremors disappeared with continued exposure
 Zeta-cypermethrin: Long-term exposure caused neurotoxicity (body tremors, decreased motor activity), decreased body weight and increased liver and spleen weight

Mutagenicity Bifenthrin, Zeta-cypermethrin: Not genotoxic in animal studies.

Carcinogenicity Bifenthrin: Weak treatment-related response for liver adenocarcinomas and benign bladder tumors (lesion) in male mice 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.

Neurological effects Bifenthrin: Causes clinical signs of neurotoxicity (tremors, impaired gait, excessive salivation) following acute or subchronic exposure. Tremors disappeared with continued exposure Zeta-cypermethrin: Causes neurotoxicity (tremors and decreased motor activity) following acute, subchronic, or chronic exposure.

Reproductive toxicity Bifenthrin, Zeta-cypermethrin: No toxicity to reproduction in animal studies.

Developmental toxicity Bifenthrin, Zeta-cypermethrin: Not teratogenic in animal studies.

STOT - single exposure Not classified.

STOT - repeated exposure Not classified.

Target organ effects Bifenthrin: Central Nervous System (CNS) Zeta-cypermethrin: Central Nervous System blood

Neurological effects Bifenthrin: Causes clinical signs of neurotoxicity (tremors, impaired gait, excessive salivation) following acute or subchronic exposure. Tremors disappeared with continued exposure Zeta-cypermethrin: Causes neurotoxicity (tremors and decreased motor activity) following acute, subchronic, or chronic exposure.

Aspiration hazard No information available.

Chemical name	ACGIH	IARC	NTP	OSHA
Zeta-cypermethrin (F2700) 52315-07-8		Group 2A		
Crystalline silica, quartz 14808-60-7	A2	Group 1	Known	X

12. ECOLOGICAL INFORMATION

Ecotoxicity

Bifenthrin (82657-04-3)				
Active Ingredient(s)	Duration	Species	Value	Units
Bifenthrin	96 h LC50	Fish	0.1	µg/L
	72 h EC50	Algae	0.822	mg/L
	48 h EC50	Crustacea	0.11	µg/L
	21 d NOEC	Fish	0.012	µg/L
	21 d NOEC	Crustacea	0.0013	µg/L

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 Bifenthrin: Moderately persistent. Does not readily hydrolyze. Not readily biodegradable.
 Zeta-cypermethrin: Non-persistent. Readily hydrolyzed. Not readily biodegradable.

Bioaccumulation Bifenthrin: The substance has a potential for bioconcentration. Zeta-cypermethrin: The substance does not have a potential for bioconcentration.

Mobility Bifenthrin, Zeta-cypermethrin: Immobile; Not expected 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 Not regulated for transportation if shipped in Non Bulk packaging. The classification below pertains to the shipment in Bulk packaging.

UN/ID no UN3077
Proper Shipping Name Environmentally hazardous substance, solid, n.o.s.
Hazard class 9
Packing Group III
Marine Pollutant Zeta-cypermethrin.
Description UN3077 Environmentally hazardous substances, solid, n.o.s.(Bifenthrin, Zeta-cypermethrin), 9 PG
 III

TDG
UN/ID no UN3077
Proper Shipping Name Environmentally hazardous substance, solid, n.o.s.
Hazard class 9
Packing Group III
Marine Pollutant Bifenthrin, Zeta-cypermethrin.
Description UN3077 Environmentally hazardous substances, solid, n.o.s.(Bifenthrin, Zeta-cypermethrin), 9 PG
 III

ICAO/IATA
UN/ID no UN3077
Proper Shipping Name Environmentally hazardous substance, solid, n.o.s.
Hazard class 9
Packing Group III
Description UN3077 Environmentally hazardous substances, solid, n.o.s.(Bifenthrin, Zeta-cypermethrin), 9 PG
 III
Limited quantity 30 kg G

IMDG/IMO
UN/ID no UN3077
Proper Shipping Name Environmentally hazardous substance, solid, n.o.s.
Hazard class 9
Packing Group III
EmS No. F-A, S-F
Marine Pollutant Bifenthrin, Zeta-cypermethrin
Description UN3077 Environmentally hazardous substances, solid, n.o.s.(Bifenthrin, Zeta-cypermethrin), 9 PG
 III

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 contains a chemical

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or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical name	CAS-No	Weight %	SARA 313 - Threshold Values %
Bifenthrin - 82657-04-3	82657-04-3	0.2	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

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

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

FIFRA Information

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

CAUTION

Harmful if swallowed. Causes moderate eye irritation. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

This pesticide is extremely toxic to fish, aquatic invertebrates, oysters and shrimp.

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

This product does not contain any substances regulated by state right-to-know regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Bifenthrin 82657-04-3	X		
Zeta-cypermethrin (F2700) 52315-07-8		X	
Crystalline silica, quartz 14808-60-7	X	X	X
Hexylene Glycol 107-41-5	X	X	X

International Inventories

Chemical name	TSCA (United States)	DSL (Canada)	EINECS/ELINCS (Europe)	ENCS (Japan)	China (IECSC)	KECL (Korea)	PICCS (Philippines)	AICS (Australia)
Bifenthrin 82657-04-3				X	X	X		

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Zeta-cypermethrin (F2700) 52315-07-8			X		X	X	X	X
bentonite 1302-78-9	X	X	X		X	X	X	X
Crystalline silica, quartz 14808-60-7	X	X	X	X	X	X	X	X
Hexylene Glycol 107-41-5	X	X	X	X	X	X	X	X

Mexico - Grade Moderate risk, Grade 2

Chemical name	Carcinogen Status	Mexico
Crystalline silica, quartz		Mexico: TWA 0.1 mg/m ³
Hexylene Glycol		Mexico: Ceiling 25 ppm Mexico: Ceiling 125 mg/m ³

Chemical name	Mexico - Pollutant Release and Transfer Register - Reporting Emissions for Fabrication, Process or Use -Threshold Quantities	Pollutant Release and Transfer Register - Reporting Emissions - Threshold Quantities
Bifenthrin	100 2500 kg/yr	100 kg/yr

WHMIS Hazard Class D2A - Very toxic materials
 D2B - Toxic materials



16. OTHER INFORMATION

NFPA	Health Hazards 2	Flammability 1	Instability 0	Special Hazards -
HMIS	Health Hazards 2*	Flammability 1	Physical hazard 0	Personal Protection X

*Indicates a chronic health hazard.

Revision date: 2016-05-26
Reason for revision: Format Change

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End of Safety Data Sheet