

SAFETY DATA SHEET
Triple Crown™ T&O Insecticide

SDS # : 6720-1-A
Revision date: 2018-05-17
Format: NA
Version 1.05



1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name Triple Crown™ T&O Insecticide

Other means of identification

Product Code(s) 6720-1-A

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

, 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),

, IMIDACLOPRID: (2E)-1-[(6-chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine (CAS name); (E)-1-(6-chloro-3-pyridylmethyl)-N-nitroimidazolidin-2-ylideneamine (IUPAC name)

Active Ingredient(s) Bifenthrin, Zeta-cypermethrin, Imidacloprid

Chemical Family Pyrethroid Pesticide, Neonicotinoid

Recommended use of the chemical and restrictions on use

Recommended Use: Insecticide

Restrictions on Use: Use as recommended by the label.

Supplier 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 (ProPharma Group - U.S.A. & Canada)
1 651 / 632-6793 (ProPharma Group - 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)

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 3
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Carcinogenicity	Category 2
Specific target organ toxicity (single exposure)	Category 1
Specific target organ toxicity (repeated exposure)	Category 1

GHS Label elements, including precautionary statements**EMERGENCY OVERVIEW****Danger****Hazard Statements**

H301 - Toxic if swallowed
 H332 - Harmful if inhaled
 H351 - Suspected of causing cancer
 H370 - Causes damage to organs
 H372 - Causes damage to organs through prolonged or repeated exposure

**Precautionary Statements - Prevention**

P202 - Do not handle until all safety precautions have been read and understood
 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
 P280 - Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

P308 + P311 - If exposed or concerned: Call a POISON CENTER or doctor
 P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
 P312 - Call a POISON CENTER or doctor if you feel unwell
 P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor
 P330 - Rinse mouth

Precautionary Statements - Storage

P405 - Store locked up

Precautionary Statements - Disposal

P501 - Dispose of contents/container according to label directions

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, Neonicotinoid.

Chemical name	CAS-No	Weight %
Imidacloprid	138261-41-3	13.83
Bifenthrin	82657-04-3	7.87
Zeta-cypermethrin (F2700)	52315-07-8	2.7
Propylene glycol	57-55-6	5-10
Naphtha (petroleum), heavy aromatic	64742-94-5	5-10
2-Methylnaphthalene	91-57-6	<8 *
1-Methylnaphthalene	90-12-0	<5 *

* This component is a constituent(s) of the ingredient: Naphtha (petroleum), heavy aromatic. 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 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. Never give anything by mouth to an unconscious person.
Most important symptoms and effects, both acute and delayed	Central nervous system effects.
Indication of immediate medical attention and special treatment needed, if necessary	Contains petroleum distillate. If large amounts have been ingested, the stomach and intestines should be evacuated. Vomiting may cause aspiration pneumonia. This product is a pyrethroid. 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	None known
Explosion data	
Sensitivity to Mechanical Impact	No information available.
Sensitivity to Static Discharge	No information available.
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. Remove all sources of ignition. 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	Dike to prevent runoff. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.
Methods for cleaning up	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.

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
2-Methylnaphthalene (91-57-6)	TWA: 0.5 ppm	-	-	-
1-Methylnaphthalene (90-12-0)	TWA: 0.5 ppm	-	-	-
Chemical name	British Columbia	Quebec	Ontario TWAEV	Alberta
Propylene glycol (57-55-6)	-	-	TWA: 10 mg/m ³ aerosol only TWA: 50 ppm aerosol and vapor TWA: 155 mg/m ³ aerosol and vapor	-
2-Methylnaphthalene (91-57-6)	TWA: 0.5 ppm Skin	-	TWA: 0.5 ppm Skin	-
1-Methylnaphthalene (90-12-0)	TWA: 0.5 ppm Skin	-	TWA: 0.5 ppm Skin	-

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.
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Skin and Body Protection	Wear long-sleeved shirt, long pants, socks, shoes, chemical-resistant gloves and headgear.
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.
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	Off-white Liquid
Physical State	Liquid
Color	Off-white
Odor	Aromatic hydrocarbon
Odor threshold	No information available
pH	4.01
Melting point/freezing point	Not applicable
Boiling Point/Range	No information available
Flash point	> 100 °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
Density	9.22 lb/gal
Specific gravity	No information available
Water solubility	Miscible with 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	334 cSt (mm ² /s) @ 23°C, 760 cSt (mm ² /s) @ 43°C
Viscosity, dynamic	No information available
Explosive properties	No information available
Oxidizing properties	No information available
Molecular weight	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity	None under normal use conditions
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	Carbon oxides (CO _x). Hydrogen chloride. Hydrogen fluoride.

11. TOXICOLOGICAL INFORMATION**Product Information**

LD50 Oral 175 mg/kg (rat)
 LD50 Dermal > 5000 5,000 mg/kg (rat)
 LC50 Inhalation > 2.08 mg/L (rat)

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

Information on toxicological effects

Symptoms Large doses of zeta-cypermethrin, ingested by laboratory animals, may produce signs of toxicity including tremors, incoordination, convulsions, staggered gait, and oral discharge. Large doses of bifenthrin ingested by laboratory animals produced signs of toxicity including convulsions, tremors and bloody nasal discharge.

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 weight.

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

Carcinogenicity Imidacloprid, No evidence of carcinogenicity from animal studies 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. There was no evidence of carcinogenic activity of naphthalene in male mice, but there was some evidence of carcinogenic activity in female mice and clear evidence of carcinogenic activity in male and female rats in 2-year inhalation studies conducted by the National Toxicology Program (NTP).

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

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

STOT - single exposure Causes damage to organs: See listed target organs below.

STOT - repeated exposure Causes damage to organs through prolonged or repeated exposure: See listed target organs below.

Target organ effects Central Nervous System (CNS), blood, Thyroid, liver

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 Potential for aspiration if swallowed.

Chemical name	ACGIH	IARC	NTP	OSHA
Imidacloprid 138261-41-3		Group 2A		
Zeta-cypermethrin (F2700) 52315-07-8		Group 2A		

Legend:

IARC (International Agency for Research on Cancer)
 Group 2A - Probably Carcinogenic to Humans

12. ECOLOGICAL INFORMATION

Ecotoxicity

Imidacloprid (138261-41-3)				
Active Ingredient(s)	Duration	Species	Value	Units
Imidacloprid	96 h LC50	Fish	211	mg/L
	48 h EC50	Daphnia	85	mg/L
	LD50	Bee	0.0039	µg/bee
	LD50 Oral	Bobwhite quail	152	mg/kg

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 Imidacloprid: Does not readily hydrolyze. 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 The following packaging types are shipped under the Limited Quantity provisions as specified in 49CFR 173.153(b).
4 x 1 gallon, 4 x 1 quart, 4 x 4 x 1 quart

Packaging Type	Non-Bulk / Bulk
UN/ID no	UN3352
Proper Shipping Name	Pyrethroid pesticide, liquid, toxic
Hazard class	6.1
Packing Group	III
Marine Pollutant	Zeta-cypermethrin.
Description	UN3352, Pyrethroid pesticide, liquid, toxic (Zeta-cypermethrin), 6.1, III The Marine Pollutant mark is only applicable when shipped in BULK packages.

TDG

UN/ID no UN3352
 Proper Shipping Name Pyrethroid pesticide, liquid, toxic
 Hazard class 6.1
 Packing Group III
 Marine Pollutant Bifenthrin, Zeta-cypermethrin.
 Description UN3352 Pyrethroid pesticide, liquid, toxic (Bifenthrin, Zeta-cypermethrin), 6.1 PG III, Marine Pollutant

ICAO/IATA

UN/ID no UN3352
 Proper Shipping Name Pyrethroid pesticide, liquid, toxic
 Hazard class 6.1
 Packing Group III
 Description UN3352 Pyrethroid pesticide, liquid, toxic (Bifenthrin, Zeta-cypermethrin), 6.1, PG III, Marine pollutant
 Limited quantity 2 L

IMDG/IMO

UN/ID no UN3352
 Proper Shipping Name Pyrethroid pesticide, liquid, toxic
 Hazard class 6.1
 Packing Group III
 EmS No. F-A, S-A
 Marine Pollutant Bifenthrin, Zeta-cypermethrin
 Description UN3352 Pyrethroid pesticide, liquid, toxic (Bifenthrin, Zeta-cypermethrin), 6.1, PG III, Marine Pollutant

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 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	7.87	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 contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Naphthalene 91-20-3	100 lb	X	X	X

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances
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		RQs
Methyl ethyl ketone 78-93-3	5000 lb 2270 kg	
Naphthalene 91-20-3	100 lb 45.4 kg	

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:

WARNING

*May be fatal if swallowed. Causes moderate eye irritation.
 This pesticide is toxic to marine/estuarine invertebrates.*

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Bifenthrin 82657-04-3	X		
Zeta-cypermethrin (F2700) 52315-07-8		X	
Propylene glycol 57-55-6	X		X
2-Methylnaphthalene 91-57-6	X		
1-Methylnaphthalene 90-12-0	X	X	X

International Inventories

Chemical name	TSCA (United States)	DSL (Canada)	EINECS/ELINC S (Europe)	ENCS (Japan)	China (IECSC)	KECL (Korea)	PICCS (Philippines)	AICS (Australia)
Imidacloprid 138261-41-3			X		X		X	
Bifenthrin 82657-04-3				X	X	X		
Zeta-cypermethrin (F2700) 52315-07-8			X		X	X	X	X
Propylene glycol 57-55-6	X	X	X	X	X	X	X	X
Naphtha (petroleum), heavy aromatic 64742-94-5	X	X	X		X	X	X	X
2-Methylnaphthalene 91-57-6	X	X	X	X	X		X	X
1-Methylnaphthalene 90-12-0	X	X	X	X	X		X	X

Mexico - Grade

Moderate risk, Grade 2

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
Imidacloprid	500 5000 kg/yr	500 kg/yr
Bifenthrin	100 2500 kg/yr	100 kg/yr

WHMIS Statement

This product has been classified in accordance with the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

WHMIS Hazard Class

D1B - Toxic materials
 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.

NFPA/HMIS Ratings Legend

Severe = 4; Serious = 3; Moderate = 2; Slight = 1; Minimal = 0

Revision date:

2018-05-17

Reason for revision:

Format Change

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End of Safety Data Sheet