

**SAFETY DATA SHEET**  
Triple Crown™ T&O Insecticide

SDS #: 6720-1-A  
Revision date: 2015-04-28  
Format: NA  
Version 1.01



## 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 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)

IMIDACLOPRID: (E)-1-(6-chloro-3-pyridylmethyl)-N-nitroimidazolidin-2-ylideneamine

**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

**Manufacturer Address**

FMC Corporation  
1735 Market Street  
Philadelphia, PA 19103  
(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 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  
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

**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 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, 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

#### 4. FIRST AID MEASURES

<b>Eye Contact</b>	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.
<b>Skin Contact</b>	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.
<b>Inhalation</b>	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.
<b>Ingestion</b>	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.
<b>Most important symptoms and effects, both acute and delayed</b>	Central nervous system effects.
<b>Indication of immediate medical attention and special treatment needed, if necessary</b>	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

<b>Suitable Extinguishing Media</b>	Foam. Carbon dioxide (CO <sub>2</sub> ). Dry chemical. Water spray or fog.
<b>Specific Hazards Arising from the Chemical</b>	None known
<b>Explosion data</b>	
<b>Sensitivity to Mechanical Impact</b>	Not sensitive.
<b>Sensitivity to Static Discharge</b>	Not sensitive.
<b>Protective equipment and precautions for firefighters</b>	As in any fire, wear self-contained breathing apparatus and full protective gear. Isolate fire area. Evaluate downwind.

#### 6. ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions</b>	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.
<b>Other</b>	For further clean-up instructions, call FMC Emergency Hotline number listed in Section 1 "Product and Company Identification" above.
<b>Environmental Precautions</b>	Keep people and animals away from and upwind of spill/leak. Keep material out of lakes, streams, ponds, and sewer drains.
<b>Methods for Containment</b>	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 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
2-Methylnaphthalene 91-57-6	S* TWA: 0.5 ppm	-	-	-
1-Methylnaphthalene 90-12-0	S* TWA: 0.5 ppm	-	-	-
Chemical name	British Columbia	Quebec	Ontario TWAEV	Alberta
Propylene glycol 57-55-6	-	-	TWA: 10 mg/m <sup>3</sup> (aerosol only)  TWA: 50 ppm (aerosol and vapor)  TWA: 155 mg/m <sup>3</sup> (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.

**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, shoes, chemical-resistant gloves and headgear.

**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.

<b>Hygiene measures</b>	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.
<b>General information</b>	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

<b>Appearance</b>	Off-white, Liquid
<b>Physical State</b>	Liquid
<b>Color</b>	Off-white
<b>Odor</b>	Aromatic hydrocarbon
<b>Odor threshold</b>	No information available
<b>pH</b>	4.01
<b>Melting point/freezing point</b>	Not applicable
<b>Boiling Point/Range</b>	No information available
<b>Flash point</b>	> 100 °C
<b>Evaporation Rate</b>	No information available
<b>Flammability (solid, gas)</b>	No information available
<b>Flammability Limit in Air</b>	
Upper flammability limit:	No information available
Lower flammability limit:	No information available
<b>Vapor pressure</b>	No information available
<b>Vapor density</b>	No information available
<b>Density</b>	9.22 lb/gal
<b>Specific gravity</b>	No information available
<b>Water solubility</b>	Miscible with water
<b>Solubility in other solvents</b>	No information available
<b>Partition coefficient</b>	No information available
<b>Autoignition temperature</b>	No information available
<b>Decomposition temperature</b>	No information available
<b>Viscosity, kinematic</b>	334 cSt (mm <sup>2</sup> /s) @ 23°C, 760 cSt (mm <sup>2</sup> /s) @ 43°C
<b>Viscosity, dynamic</b>	No information available
<b>Explosive properties</b>	No information available
<b>Oxidizing properties</b>	No information available
<b>Molecular weight</b>	No information available
<b>Bulk density</b>	No information available

## 10. STABILITY AND REACTIVITY

<b>Reactivity</b>	None under normal use conditions.
<b>Chemical Stability</b>	Stable under recommended storage conditions.
<b>Possibility of Hazardous Reactions</b>	None under normal processing.
<b>Hazardous polymerization</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid</b>	Heat, flames and sparks
<b>Incompatible materials</b>	None known.
<b>Hazardous Decomposition Products</b>	Carbon oxides (COx). Hydrogen chloride. Hydrogen fluoride.

## 11. TOXICOLOGICAL INFORMATION

### Product Information

<b>LD50 Oral</b>	175 mg/kg (rat)
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LD50 Dermal	> 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**

<b>Chronic toxicity</b>	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.
<b>Mutagenicity</b>	Bifenthrin, Zeta-cypermethrin: Not genotoxic in animal studies.
<b>Carcinogenicity</b>	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).
<b>Neurological effects</b>	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.
<b>Reproductive toxicity</b>	Imidacloprid, Bifenthrin, Zeta-cypermethrin: No toxicity to reproduction in animal studies.
<b>Developmental toxicity</b>	Bifenthrin, Zeta-cypermethrin: Not teratogenic in animal studies.
<b>STOT - single exposure</b>	Causes damage to organs: See listed target organs below.
<b>STOT - repeated exposure</b>	Causes damage to organs through prolonged or repeated exposure: See listed target organs below.
<b>Target organ effects</b>	Central Nervous System (CNS), blood, Thyroid, liver.
<b>Neurological effects</b>	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.
<b>Aspiration hazard</b>	Potential for aspiration if swallowed.

**12. ECOLOGICAL INFORMATION****Ecotoxicity**

<b>Imidacloprid (138261-41-3)</b>				
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

<b>Bifenthrin (82657-04-3)</b>				
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

<b>Zeta-cypermethrin (F2700) (52315-07-8)</b>				
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

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

<b>TDG</b>	
<b>UN/ID no</b>	UN3352
<b>Hazard class</b>	6.1
<b>Packing Group</b>	III
<b>Marine Pollutant</b>	Bifenthrin, Zeta-cypermethrin.
<b>Description</b>	UN3352 Pyrethroid pesticide, liquid, toxic (Bifenthrin, Zeta-cypermethrin), 6.1 PG III, Marine Pollutant

<b>ICAO/IATA</b>	
<b>UN/ID no</b>	UN3352
<b>Hazard class</b>	6.1
<b>Packing Group</b>	III
<b>Description</b>	UN3352 Pyrethroid pesticide, liquid, toxic (Bifenthrin, Zeta-cypermethrin), 6.1, PG III, Marine pollutant

Limited quantity 2 L

**IMDG/IMO**

UN/ID no UN3352  
 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	7.9	1.0
Naphthalene - 91-20-3	91-20-3	0.1-1	0.1

**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:*

**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:

Chemical name	California Prop. 65
Naphthalene - 91-20-3	Carcinogen

**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	
2-Methylnaphthalene 91-57-6	X		
Propylene glycol 57-55-6	X		X
1-Methylnaphthalene 90-12-0	X	X	X

**International Inventories**

Component	TSCA (United States)	DSL (Canada)	EINECS/ELI NCS (Europe)	ENCS (Japan)	China (IECSC)	KECL (Korea)	PICCS (Philippines)	AICS (Australia)
Imidacloprid 138261-41-3 ( 13.83 )			X		X		X	
Bifenthrin 82657-04-3 ( 7.87 )				X	X	X		
Zeta-cypermethrin (F2700) 52315-07-8 ( 2.7 )			X		X	X	X	X
Propylene glycol 57-55-6 ( 5-10 )	X	X	X	X	X	X	X	X
Naphtha (petroleum), heavy aromatic 64742-94-5 ( 5-10 )	X	X	X	X	X	X	X	X
2-Methylnaphthalene 91-57-6 ( <8 * )	X	X	X	X	X		X	X
1-Methylnaphthalene 90-12-0 ( <5 * )	X	X	X	X	X		X	X

**Mexico - Grade**

Moderate risk, Grade 2

**WHMIS Hazard Class**D1B - Toxic materials  
D2A - Very toxic materials  
D2B - Toxic materials**16. OTHER INFORMATION**

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

\*Indicates a chronic health hazard.

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Revision note: Format Change

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**End of Safety Data Sheet**