

FORCE 3.0G INSECTICIDE

Version 1.0 Revision Date: 05/16/2019 SDS Number: S00057223773 This version replaces all previous versions.

SECTION 1. IDENTIFICATION

Product name : FORCE 3.0G INSECTICIDE
Design code : A12868A
Product Registration number : 23917
Other means of identification : No data available

Manufacturer or supplier's details

Company name of supplier : Syngenta Canada Inc.
Address : 140 Research Lane, Research Park
Guelph ON N1G 4Z3
Canada
Telephone : 1-87-SYNGENTA (1-877-964-3682)
Telefax : 1-519-823-0504
Emergency telephone number : 1-800-327-8633 (FAST MED)

Recommended use of the chemical and restrictions on use

Recommended use : Insecticide

SECTION 2. HAZARDS IDENTIFICATION**GHS classification in accordance with the Hazardous Products Regulations**

Acute toxicity (Oral) : Category 4
Acute toxicity (Inhalation) : Category 4
Specific target organ toxicity - repeated exposure : Category 1 (Lungs)

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H302 + H332 Harmful if swallowed or if inhaled.
H372 Causes damage to organs (Lungs) through prolonged or repeated exposure.

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Precautionary statements : **Prevention:**
 P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
 P264 Wash skin thoroughly after handling.
 P270 Do not eat, drink or smoke when using this product.
 P271 Use only outdoors or in a well-ventilated area.

Response:
 P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
 P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
 P314 Get medical advice/ attention if you feel unwell.

Disposal:
 P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

May cause temporary itching, tingling, burning or numbness of exposed skin, called paresthesia.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Components

Chemical name	CAS-No.	Concentration (% w/w)
dioxosilane	14808-60-7	>= 5 - < 10
tefluthrin (ISO)	79538-32-2	3

Actual concentration or concentration range is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

General advice : Have the product container, label or Safety Data Sheet with you when calling the emergency number, a poison control center or physician, or going for treatment.

If inhaled : Move the victim to fresh air.
 If breathing is irregular or stopped, administer artificial respiration.
 Keep patient warm and at rest.
 Call a physician or poison control centre immediately.

In case of skin contact : Take off contaminated clothing and shoes immediately.
 Wash off immediately with plenty of water.
 If skin irritation persists, call a physician.
 Wash contaminated clothing before re-use.

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
 Remove contact lenses.
 Immediate medical attention is required.

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- If swallowed : If swallowed, seek medical advice immediately and show this container or label.
Do NOT induce vomiting.
- Most important symptoms and effects, both acute and delayed : Skin contact paresthesia effects (itching, tingling, burning or numbness) are transient, lasting up to 24 hours.
- Notes to physician : There is no specific antidote available.
Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Extinguishing media - small fires
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Extinguishing media - large fires
Alcohol-resistant foam
or
Water spray
- Unsuitable extinguishing media : Do not use a solid water stream as it may scatter and spread fire.
- Specific hazards during fire-fighting : As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion (see section 10).
Exposure to decomposition products may be a hazard to health.
- Further information : Do not allow run-off from fire fighting to enter drains or water courses.
Cool closed containers exposed to fire with water spray.
- Special protective equipment for firefighters : Wear full protective clothing and self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Refer to protective measures listed in sections 7 and 8.
Avoid dust formation.
- Environmental precautions : Do not flush into surface water or sanitary sewer system.
If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods and materials for containment and cleaning up : Contain spillage, pick up with an electrically protected vacuum cleaner or by wet-brushing and transfer to a container for disposal according to local regulations (see section 13).
Do not create a powder cloud by using a brush or compressed air.
Clean contaminated surface thoroughly.
Clean with detergents. Avoid solvents.
Retain and dispose of contaminated wash water.

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SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : No special protective measures against fire required.
Avoid contact with skin and eyes.
When using do not eat, drink or smoke.
For personal protection see section 8.
- Conditions for safe storage : No special storage conditions required.
Keep containers tightly closed in a dry, cool and well-ventilated place.
Keep out of the reach of children.
Keep away from food, drink and animal feedingstuffs.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
dioxosilane	14808-60-7	TWA (Respirable particulates)	0.025 mg/m ³	CA AB OEL
		TWA (Respirable fraction)	0.1 mg/m ³	CA ON OEL
		TWAEV (respirable dust)	0.1 mg/m ³	CA QC OEL
		TWA (Respirable)	0.025 mg/m ³ (Silica)	CA BC OEL
		TWA (Respirable fraction)	0.025 mg/m ³ (Silica)	ACGIH
tefluthrin (ISO)	79538-32-2	TWA	0.04 mg/m ³ (Skin)	Syngenta

- Engineering measures** : THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION AND PACKAGING OF THE PRODUCT. FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.

Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated.

The extent of these protection measures depends on the actual risks in use.

Maintain air concentrations below occupational exposure standards.

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Where necessary, seek additional occupational hygiene advice.

Personal protective equipment

Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
 Suitable respiratory equipment:
 Respirator with a half face mask
 The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used.

Hand protection

Remarks : Wear protective gloves. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. The break through time depends amongst other things on the material, the thickness and the type of glove and therefore has to be measured for each case. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Eye protection : No special protective equipment required.

Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.
 Remove and wash contaminated clothing before re-use.
 Wear as appropriate:
 Dust impervious protective suit

Protective measures : The use of technical measures should always have priority over the use of personal protective equipment.
 When selecting personal protective equipment, seek appropriate professional advice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : granules
Colour : brown
Odour : No data available

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Odour Threshold	:	No data available
pH	:	No data available
Melting point/range	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	No data available
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Not expected to form explosive dust-air mixtures.
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	No data available
Relative vapour density	:	No data available
Bulk density	:	0.672 g/cm ³
Solubility(ies)		
Solubility in other solvents	:	not soluble Solvent: Water
Partition coefficient: n-octanol/water	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	None reasonably foreseeable.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	No dangerous reaction known under conditions of normal use.

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Conditions to avoid : No decomposition if used as directed.

Incompatible materials : None known.

Hazardous decomposition products : No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Ingestion
Inhalation
Skin contact
Eye contact

Acute toxicity

Product:

Acute oral toxicity : LD50 (Rat, male): 969 mg/kg
Remarks: Based on data from similar materials

LD50 (Rat, female): 1,213 mg/kg
Remarks: Based on data from similar materials

Acute inhalation toxicity : LC50 (Rat, male): 1.97 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance/mixture is not toxic on inhalation as defined by dangerous goods regulations.
Remarks: Based on data from similar materials

LC50 (Rat, female): 1.77 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance/mixture is not toxic on inhalation as defined by dangerous goods regulations.
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: Based on data from similar materials

Components:

tefluthrin (ISO):

Acute oral toxicity : LD50 (Rat, male): 21.8 mg/kg
LD50 (Rat, female): 34.6 mg/kg

Acute inhalation toxicity : LC50 (Rat, male and female): 0.0427 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rat, male): 316 mg/kg

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LD50 (Rat, female): 177 mg/kg

Skin corrosion/irritation**Product:**

Species : Rabbit
Result : No skin irritation
Remarks : Based on data from similar materials

Components:**tefluthrin (ISO):**

Species : Rabbit
Result : No skin irritation
Remarks : May cause temporary itching, tingling, burning or numbness of exposed skin, called paresthesia.

Serious eye damage/eye irritation**Product:**

Species : Rabbit
Result : No eye irritation
Remarks : Based on data from similar materials

Components:**tefluthrin (ISO):**

Species : Rabbit
Result : No eye irritation

Respiratory or skin sensitisation**Product:**

Species : Guinea pig
Method : Buehler Test
Result : Did not cause sensitisation on laboratory animals.

Components:**tefluthrin (ISO):**

Species : Guinea pig
Result : Did not cause sensitisation on laboratory animals.

Germ cell mutagenicity**Components:****tefluthrin (ISO):**

Germ cell mutagenicity - Assessment : Animal testing did not show any mutagenic effects.

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Carcinogenicity

Components:

tefluthrin (ISO):

Carcinogenicity - Assessment : No evidence of carcinogenicity in animal studies.

Reproductive toxicity

Components:

tefluthrin (ISO):

Reproductive toxicity - Assessment : No toxicity to reproduction

STOT - repeated exposure

Components:

dioxosilane:

Exposure routes : Inhalation
 Target Organs : Lungs
 Assessment : The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 1.

Repeated dose toxicity

Components:

tefluthrin (ISO):

Remarks : No adverse effect has been observed in chronic toxicity tests.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

tefluthrin (ISO):

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.06 µg/l
 Exposure time: 96 h
 LC50 (Lepomis macrochirus (Bluegill sunfish)): 0.13 µg/l
 Exposure time: 96 h
 Toxicity to daphnia and other aquatic invertebrates : EC50 (Americamysis): 0.053 µg/l
 Exposure time: 96 h
 Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): > 1.05 mg/l
 Exposure time: 96 h
 Remarks: Highest attainable concentration

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M-Factor (Acute aquatic toxicity)	:	10,000
Toxicity to fish (Chronic toxicity)	:	NOEC (Pimephales promelas (fathead minnow)): 0.0096 µg/l Exposure time: 28 d
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 0.00792 µg/l Exposure time: 21 d
		NOEC (Americamysis): 0.0124 µg/l Exposure time: 28 d
M-Factor (Chronic aquatic toxicity)	:	10,000
Toxicity to microorganisms	:	EC50 (activated sludge): > 1,000 mg/l Exposure time: 3 h

Persistence and degradability

Components:

tefluthrin (ISO):

Stability in water : Degradation half life: 60 - 203 d
Remarks: The substance is stable in water.

Bioaccumulative potential

Components:

tefluthrin (ISO):

Bioaccumulation : Remarks: Tefluthrin bioaccumulates.

Mobility in soil

Components:

tefluthrin (ISO):

Distribution among environmental compartments : Remarks: immobile

Stability in soil : Dissipation time: 48 - 151 d
Percentage dissipation: 50 % (DT50)
Remarks: Product is not persistent.

Other adverse effects

Components:

tefluthrin (ISO):

Results of PBT and vPvB assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

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SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

- Waste from residues : Refer to the product label for specific disposal/recycling information
- Do not contaminate ponds, waterways or ditches with chemical or used container.
Do not dispose of waste into sewer.
Where possible recycling is preferred to disposal or incineration.
If recycling is not practicable, dispose of in compliance with local regulations.
- Contaminated packaging : Refer to the product label for specific disposal/recycling information
- Empty remaining contents.
Triple rinse containers.
Empty containers should be taken to an approved waste handling site for recycling or disposal.
Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

- UN number : UN 3077
- Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (TEFLUTHRIN)
- Class : 9
- Packing group : III
- Labels : 9

IATA-DGR

- UN/ID No. : UN 3077
- Proper shipping name : Environmentally hazardous substance, solid, n.o.s. (TEFLUTHRIN)
- Class : 9
- Packing group : III
- Labels : Miscellaneous
- Packing instruction (cargo aircraft) : 956
- Packing instruction (passenger aircraft) : 956
- Environmentally hazardous : yes

IMDG-Code

- UN number : UN 3077
- Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

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(TEFLUTHRIN)
 Class : 9
 Packing group : III
 Labels : 9
 EmS Code : F-A, S-F
 Marine pollutant : yes

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

TDG

UN number : UN 3077
 Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,
 N.O.S.
 (TEFLUTHRIN)

Class : 9
 Packing group : III
 Labels : 9
 ERG Code : 171
 Marine pollutant : yes(TEFLUTHRIN)

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

This chemical is a pest control product registered by Health Canada Pest Management Regulatory Agency and is subject to certain labelling requirements under the Pest Control Products Act. These requirements differ from the classification criteria and hazard information required for GHS-consistent safety data sheets. The following is the hazard information required on the pest control product label: Read the label, authorised under the Pest Control Products Act, prior to using or handling the pest control product

There are Canada-specific environmental requirements for handling, use, and disposal of this pest control product that are indicated on the label.

Warning

Skull and crossbones

poison

Potential skin sensitiser

The components of this product are reported in the following inventories:

DSL : This product contains the following components that are not on the Canadian DSL nor NDSL.

tefluthrin (ISO)

fatty acids, C8-10, Me esters

fatty acids, C6-12, me esters

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Canadian lists

No substances are subject to a Significant New Activity Notification.

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
CA AB OEL	:	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
CA BC OEL	:	Canada. British Columbia OEL
CA ON OEL	:	Ontario Table of Occupational Exposure Limits made under the Occupational Health and Safety Act.
CA QC OEL	:	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
ACGIH / TWA	:	8-hour, time-weighted average
CA AB OEL / TWA	:	8-hour Occupational exposure limit
CA BC OEL / TWA	:	8-hour time weighted average
CA ON OEL / TWA	:	Time-Weighted Average Limit (TWA)
CA QC OEL / TWAEV	:	Time-weighted average exposure value

AICS - Australian Inventory of Chemical Substances; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; CPR - Controlled Products Regulations; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very

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Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

Revision Date : 05/16/2019

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

CA / EN