

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixtures  
Trade name : Zoecon Duplex-G  
Synonyms : EPA Reg. No.: 89459-93, RF2230 D-Granules

#### 1.2. Recommended use and restrictions on use

Recommended use : Insect growth regulator.  
Restrictions on use : Keep out of reach of children, Avoid contact with eyes, skin or clothing, Avoid breathing dust.

#### 1.3. Supplier

Central Garden & Pet Company  
1501 E. Woodfield Road, Suite 200W  
Schaumburg, IL 60173 - United States  
www.altosid.com

#### 1.4. Emergency telephone number

Emergency number : 1-888-248-7763  
1-800-424-9300 - CHEMTREC  
1-703-527-3887 - CHEMTREC - Outside North America - Collect Calls Accepted

### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### GHS-US classification

Skin sensitization Category 1	May cause an allergic skin reaction
Carcinogenicity Category 1A	May cause cancer
Specific target organ toxicity (repeated exposure) Category 1	Causes damage to organs through prolonged or repeated exposure

#### 2.2. GHS Label elements, including precautionary statements

##### GHS-US labeling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : May cause an allergic skin reaction  
May cause cancer  
Causes damage to organs through prolonged or repeated exposure

Precautionary statements (GHS-US) : Obtain special instructions before use  
Do not handle until all safety precautions have been read and understood  
Avoid breathing dust/fume/gas/mist/vapors/spray  
Wash hands, forearms and face thoroughly after handling  
Do not eat, drink or smoke when using this product  
Contaminated work clothing must not be allowed out of the workplace  
Wear protective gloves/protective clothing/eye protection/face protection  
If on skin: Wash with plenty of soap and water  
If exposed or concerned: Get medical advice/attention  
Get medical advice/attention if you feel unwell  
If skin irritation or rash occurs: Get medical advice/attention  
Wash contaminated clothing before reuse  
Store locked up  
Dispose of contents/container to in accordance with local/regional/national/international regulations

# Zoecon Duplex-G

## Safety Data Sheet

### 2.3. Other hazards which do not result in classification

Other hazards not contributing to the classification : The finished product is not considered carcinogenic because of the product's physical form. The Hazard Statement "May Cause Cancer" is presented because a component of this product contains naturally occurring crystalline silica (quartz) which is classified as carcinogenic to humans if inhaled. Respiratory exposure to silica dust from the finished product is not expected to occur under normal conditions of use due to the manner in which the constituents are bound. The crystalline silica in the finished product is unlikely to pose personal exposure via inhalation in light of studies conducted that indicate there is minimal liberation of particulates from the product during extreme handling or transport.

### 2.4. Unknown acute toxicity (GHS US)

Not applicable

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	%
Bacillus thuringiensis	(CAS No) 68038-71-1	5.35
(s)-Methoprene	(CAS No) 65733-16-6	1.6
Silica, crystalline - quartz	(CAS No) 14808-60-7	50 - 64
Perlite	(CAS No) 93763-70-3	15.95
Titanium dioxide	(CAS No) 13463-67-7	0.45
Alumina	(CAS No) 1344-28-1	0 - 12.2
Iron oxide	(CAS No) 1309-37-1	0 - 1.3
Silica, amorphous, precipitated and gel	(CAS No) 112926-00-8	2.38
Other ingredients	(CAS No) N/A	Balance

## SECTION 4: First-aid measures

### 4.1. Description of first aid measures

First-aid measures after inhalation : IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

First-aid measures after skin contact : IF ON SKIN: Wash with plenty of soap and water. Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.

First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice and attention.

First-aid measures after ingestion : IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Call a poison center or a doctor if you feel unwell. Rinse mouth. Do NOT induce vomiting unless directed to do so by medical personnel.

### 4.2. Most important symptoms and effects (acute and delayed)

Symptoms/injuries after skin contact : May cause an allergic skin reaction in individuals with a sensitivity to the bacteria mixture which includes the bacillus ssp. strain of bacteria.

### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam.

Unsuitable extinguishing media : Avoid heavy hose streams.

### 5.2. Specific hazards arising from the chemical

Reactivity : The product is non-reactive under normal conditions of use, storage and transport.

### 5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

# Zoecon Duplex-G

## Safety Data Sheet

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### 6.1.1. For non-emergency personnel

Emergency procedures : Only qualified personnel equipped with suitable protective equipment may intervene. Do not breathe dust/fume/gas/mist/vapors/spray.

##### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

#### 6.2. Environmental precautions

Avoid release to the environment.

#### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Sweep or scoop spills, dispose of any unusable material in approved landfill. Use appropriate PPE.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work. Do not handle until all safety precautions have been read and understood. Take all necessary technical measures to avoid or minimize the release of the product on the workplace. Provide local exhaust or general room ventilation. Wear personal protective equipment. Avoid contact with skin and eyes.

Hygiene measures : Separate working clothes from town clothes. Launder separately. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

#### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container tightly closed. Store locked up. Store in a well-ventilated place. Keep cool.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

Silica, crystalline - quartz (14808-60-7)		
ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	0.025 mg/m <sup>3</sup> (respirable particulate matter)
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	50 µg/m <sup>3</sup>
IDLH	US IDLH (mg/m <sup>3</sup> )	50 mg/m <sup>3</sup> (respirable dust)
NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup> (respirable dust)
Perlite (93763-70-3)		
NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (total dust) 5 mg/m <sup>3</sup> (respirable dust)
Titanium dioxide (13463-67-7)		
ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup> (total dust)
IDLH	US IDLH (mg/m <sup>3</sup> )	5000 mg/m <sup>3</sup>
Aluminum oxide (Al <sub>2</sub> O <sub>3</sub> ) (1344-28-1)		
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup> (total dust) 5 mg/m <sup>3</sup> (respirable fraction)
Iron oxide (1309-37-1)		
ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup> (respirable particulate matter)
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (fume) 15 mg/m <sup>3</sup> (total dust) 5 mg/m <sup>3</sup> (respirable fraction)
IDLH	US IDLH (mg/m <sup>3</sup> )	2500 mg/m <sup>3</sup> (dust and fume)
NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup> (dust and fume)

# Zoecon Duplex-G

## Safety Data Sheet

### Silica, amorphous, precipitated and gel (112926-00-8)

OSHA

Remark (OSHA)

(3) See Table Z-3.

### 8.2. Appropriate engineering controls

- Appropriate engineering controls : Adequate ventilation systems as needed to control concentrations of airborne contaminants below applicable threshold limit values.
- Environmental exposure controls : Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways.

### 8.3. Individual protection measures/Personal protective equipment

#### Hand protection:

Protective gloves

#### Eye protection:

Safety glasses

#### Skin and body protection:

If prolonged exposure is anticipated, it is recommended for handlers to wear appropriate clothing to prevent skin contact.

#### Respiratory protection:

In case of inadequate ventilation wear respiratory protection



## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Light beige to gray granules.
Color	: Light beige to gray
Odor	: No data available
Odor threshold	: No data available
pH	: 5.33 1% in water
Melting point	: No data available
Freezing point	: Not applicable
Boiling point	: No data available
Flash point	: Not applicable
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Non flammable.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: Not applicable
Bulk density	: 0.931 g/cm <sup>3</sup>
Solubility	: Insoluble in water.
Log Pow	: No data available
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No data available
Viscosity, kinematic	: Not applicable
Viscosity, dynamic	: No data available
Explosion limits	: Not applicable
Explosive properties	: Not explosive

# Zoecon Duplex-G

## Safety Data Sheet

Oxidizing properties : Not applicable

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use. Hazardous polymerization will not occur.

### 10.4. Conditions to avoid

No data available.

### 10.5. Incompatible materials

Strong acids. Strong oxidizing agents.

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Zoecon Duplex-G	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rat	> 5000 mg/kg
pH	5.33 1% in water

Silica, crystalline - quartz (14808-60-7)	
Listed on IARC (International Agency for Research on Cancer), Listed as carcinogen on NTP (National Toxicology Program)	
IARC group	1 - Carcinogenic to Humans
National Toxicity Program (NTP) Status	Known Human Carcinogens
In OSHA Hazard Communication Carcinogen list?	Yes

Titanium dioxide (13463-67-7)	
IARC group	2B - Possibly Carcinogenic to Humans
In OSHA Hazard Communication Carcinogen list?	Yes

Iron oxide (1309-37-1)	
IARC group	3 - Not Classifiable

Silica, amorphous, precipitated and gel (112926-00-8)	
IARC group	3 - Not Classifiable

GHS-US Properties	Classification
Acute toxicity	Not classified
Skin corrosion/irritation	Not classified
Serious eye damage/irritation	Not classified
Respiratory or skin sensitization	May cause an allergic skin reaction.
Germ cells mutagen	Not classified
Carcinogenicity	May cause cancer.
Reproductive toxicity	Not classified
Specific target organ toxicant (single exposure)	Not classified
Specific target organ toxicant (repeated exposure)	Causes damage to organs through prolonged or repeated exposure.
Aspiration hazard	Not classified

### Potential health effects

#### Inhalation

# Zoecon Duplex-G

## Safety Data Sheet

Chronic	: Exposure to respirable crystalline silica is not expected during normal use of this product. However, prolonged overexposure to respirable crystalline silica may cause lung disease (silicosis).
<b>Eye</b>	
Acute	: May cause mild irritation.
<b>Mutagenicity</b>	: (s)-Methoprene has been tested and found negative for mutagenicity potential.
<b>Carcinogenicity</b>	: Crystalline silica (quartz) inhaled from occupational sources is classified as carcinogenic to humans, Titanium dioxide is classified as a possible carcinogen Group 2B by IARC, Exposure to respirable crystalline silica dust or titanium dioxide from the finished product is not expected to occur due to the manner in which the constituents are bound, thus the finished product is not considered carcinogenic under conditions of normal use.
<b>Reproductive Effects</b>	: (s)-Methoprene is not a reproductive toxin.

## SECTION 12: Ecological information

### 12.1. Toxicity

<b>(s)-Methoprene (65733-16-6)</b>	
LC50 fish 1	0.76 mg/l (Exposure time: 96h - Rainbow trout)
LC50 fish 2	> 0.37 mg/l (Exposure time: 96h - Blue gill)
EC50 Daphnia 1	0.36 mg/l (Exposure time: 48h - Daphnia magna)
EC50 other aquatic organisms 1	0.11 mg/l (Exposure time: 96h - Mysid shrimp)
NOEC chronic fish	0.048 mg/l (Fathead minnow)
NOEC chronic crustacea	0.014 mg/l (Mysid shrimp)

### 12.2. Persistence and degradability

<b>(s)-Methoprene (65733-16-6)</b>	
Persistence and degradability	(s)-Methoprene degrades rapidly in sunlight, both in water and on inert surfaces. The pesticide also is metabolized rapidly in soil and does not leach. Thus, it should not persist in soil or contaminate ground water.

### 12.3. Bioaccumulative potential

<b>(s)-Methoprene (65733-16-6)</b>	
Log Kow	6.3

### 12.4. Mobility in soil

<b>(s)-Methoprene (65733-16-6)</b>	
Mobility in soil	10-14 days, rapidly hydrolyzed in soil.

### 12.5. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Product/Packaging disposal recommendations : Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

## SECTION 14: Transport information

### Department of Transportation (DOT)

In accordance with DOT  
Not regulated

### Transport by sea

Not regulated

# Zoecon Duplex-G

## Safety Data Sheet

### Air transport

Not regulated

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### Bacillus thuringiensis ssp. israelensis (68038-71-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

EPA TSCA Regulatory Flag

XU - XU - indicates a substance exempt from reporting under the Inventory Update Reporting Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(C)).

#### Silica, crystalline - quartz (14808-60-7)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

#### Titanium dioxide (13463-67-7)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

#### Aluminum oxide (Al2O3) (1344-28-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Listed on SARA Section 313 (Specific toxic chemical listings)

SARA Section 313 - Emission Reporting

1 % (fibrous forms)

#### Iron oxide (1309-37-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

#### FIFRA Labelling

EPA Registration Number

89459-93

This chemical is a pesticide product registered by the United States 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 (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

FIFRA Signal Word

**Caution**

FIFRA Hazard Statement

KEEP OUT OF REACH OF CHILDREN.

FIFRA Hazards to Humans and Domestic Animals

: Causes moderate eye irritation. Avoid contact with eyes or clothing. Due to the size and abrasiveness of the granule, use protective eyewear and clothing (e.g., waterproof gloves) to minimize exposure during loading and handling. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

FIFRA First Aid

If in eyes • Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.

FIFRA Environmental Hazards

Do not contaminate water when disposing of equipment washwater or rinsate.

### 15.2. US State regulations

No additional information available

## SECTION 16: Other information

Date of issue : 27 March 2017  
Revision date : 27 March 2017  
Supersedes : 27 March 2017

SDS US (GHS HazCom 2012) - CGP

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