SAFETY DATA SHEET

TWO.O
Version 4.0 / USA
102000032937

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier
Trade name TWO.O
Product code (UVP) 85327399
SDS Number 102000032937

Relevant identified uses of the substance or mixture and uses advised against
Use Seed treatment
Restrictions on use See product label for restrictions.

Information on supplier
Supplier Bayer CropScience
2 T.W. Alexander Drive
Research Triangle PK, NC 27709
USA

Emergency telephone no.
Emergency Telephone Number (24hr/ 7 days) 1-800-334-7577
Product Information Telephone Number 1-866-99BAYER (1-866-992-2937)

SECTION 2: HAZARDS IDENTIFICATION

Classification in accordance with regulation HCS 29CFR §1910.1200
This material is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

Hazards Not Otherwise Classified (HNOC)
Micro-organisms may have the potential to provoke sensitising reactions.
No physical hazards not otherwise classified.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous Component Name</th>
<th>CAS-No.</th>
<th>Concentration % by weight</th>
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<tbody>
<tr>
<td>Bacillus Thuringiensis EX297512</td>
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<td>&lt;1</td>
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</table>

Bacillus Thuringiensis strain EX297512: >= 5.0E+04 CFU/mL
SECTION 4: FIRST AID MEASURES

Description of first aid measures

General advice
When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.

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 physician or poison control center immediately.

Skin contact
Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water for at least 15 minutes. Call a physician or poison control center immediately.

Eye contact
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 physician or poison control center immediately.

Ingestion
Call a physician or poison control center immediately. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Rinse out mouth and give water in small sips to drink. Never give anything by mouth to an unconscious person. Do not leave victim unattended.

Most important symptoms and effects, both acute and delayed

Symptoms
To date no symptoms are known.

Indication of any immediate medical attention and special treatment needed

Treatment
Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended. There is no specific antidote.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable
None known.

Special hazards arising from the substance or mixture

No particular hazards known.

Advice for firefighters

Special protective equipment for firefighters
Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.
Further information
Use appropriate extinguishing media for material that is supplying fuel. Fight fire from upwind position. Keep out of smoke. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses.

Flash point
> 94 °C

Auto-ignition temperature
No data available

Lower explosion limit
No data available

Upper explosion limit
No data available

Explosivity
Not applicable

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Precautions
Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.

Methods and materials for containment and cleaning up

Methods for cleaning up
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations. Clean with disinfectants.

Additional advice
Use personal protective equipment. If the product is accidentally spilled, do not allow to enter soil, waterways or waste water canal.

Reference to other sections
Information regarding safe handling, see section 7. Information regarding personal protective equipment, see section 8. Information regarding waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling
Advice on safe handling
Use only in area provided with appropriate exhaust ventilation. Handle and open container in a manner as to prevent spillage.

Hygiene measures
Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics. Remove Personal Protective Equipment (PPE) immediately after handling this product. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing.

Conditions for safe storage, including any incompatibilities
Requirements for storage areas and containers

Store in a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

No known occupational limit values.

Exposure controls

Personal protective equipment

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

Respiratory protection

When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industry recommendations.

Hand protection

Waterproof gloves

Eye protection

Safety glasses with side-shields

Skin and body protection

Wear long-sleeved shirt and long pants and shoes plus socks.

General protective measures

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water. Keep and wash PPE separately from other laundry.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

beige to brown

Physical State

suspension

Odor

earthy

Odour Threshold

No data available

pH

7.0 - 7.4 at 100 % (23 °C)

Vapor Pressure

No data available

Vapor Density (Air = 1)

No data available

Density

1.035 g/cm³ at 20 °C

Evaporation rate

No data available

Boiling Point

No data available

Melting / Freezing Point

No data available
### Water solubility
- **Water solubility**
  - dispersible

### Minimum Ignition Energy
- **Minimum Ignition Energy**
  - Not applicable

### Decomposition temperature
- **Decomposition temperature**
  - Not applicable

### Partition coefficient: n-octanol/water
- **Partition coefficient: n-octanol/water**
  - Not applicable

### Viscosity
- **Viscosity**
  - 80 - 130 mPa.s at 20 °C Velocity gradient 20 /s
  - 20 - 50 mPa.s at 20 °C Velocity gradient 100 /s

### Flash point
- **Flash point**
  - > 94 °C

### Auto-ignition temperature
- **Auto-ignition temperature**
  - No data available

### Lower explosion limit
- **Lower explosion limit**
  - No data available

### Upper explosion limit
- **Upper explosion limit**
  - No data available

### Explosivity
- **Explosivity**
  - Not applicable

### SECTION 10: STABILITY AND REACTIVITY

#### Reactivity

**Thermal decomposition**
- Not applicable

**Chemical stability**
- Stable under normal conditions.

**Possibility of hazardous reactions**
- No dangerous reaction known under conditions of normal use.

**Conditions to avoid**
- Protect from sunlight. Do not expose to temperatures exceeding 40 °C/104 °F.

**Incompatible materials**
- No data available

**Hazardous decomposition products**
- No decomposition products expected under normal conditions of use.

### SECTION 11: TOXICOLOGICAL INFORMATION

#### Exposure routes
- **Eye contact, Skin contact, Inhalation, Ingestion**

#### Immediate Effects

**Eye**
- May cause mild irritation to eyes.

**Skin**
- May cause slight irritation.

**Ingestion**
- Harmful if swallowed.

**Inhalation**
- May cause respiratory tract irritation.

**Information on toxicological effects**
Acute oral toxicity: LD50 (female Rat) > 5,000 mg/kg
Acute inhalation toxicity: LC50 (male/female combined Rat) > 5.13 mg/l
Exposure time: 4 h
Determined in the form of liquid aerosol.

Acute dermal toxicity: LD50 (male/female combined Rat) > 5,000 mg/kg
Skin irritation: slight irritation (Rabbit)
Eye irritation: Minimally irritating. (Rabbit)
Sensitisation: No data available

ACGIH
None.
NTP
None.
IARC
None.
OSHA
None.

Further information
Only acute toxicity studies have been performed on the formulated product.

SECTION 12: ECOLOGICAL INFORMATION

Environmental precautions
Do not allow to get into surface water, drains and ground water.
Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water.
Apply this product as specified on the label.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods
Product
Dispose in accordance with all local, state/provincial and federal regulations.

Contaminated packaging
Do not re-use empty containers.
Do not use containers for other products.
Triple rinse containers.
Follow advice on product label and/or leaflet.
Consult state and local regulations regarding the proper disposal of container.
RCRA Information
Characterization and proper disposal of this material as a special or hazardous waste is dependent upon Federal, State and local laws and are the user's responsibility. RCRA classification may apply.

SECTION 14: TRANSPORT INFORMATION

49CFR
Not dangerous goods / not hazardous material

IMDG
UN number 3245
Class 9
Packaging group
Marine pollutant NO
Proper shipping name GENETICALLY MODIFIED MICRO-ORGANISMS

IATA
UN number 3245
Class 9
Packaging group
Environm. Hazardous Mark NO
Proper shipping name GENETICALLY MODIFIED MICRO-ORGANISMS

This transportation information is not intended to convey all specific regulatory information relating to this product. It does not address regulatory variations due to package size or special transportation requirements.

SECTION 15: REGULATORY INFORMATION

US Federal Regulations
TSCA list
None.
US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)
None.
SARA Title III - Section 302 - Notification and Information
None.
SARA Title III - Section 313 - Toxic Chemical Release Reporting
None.
US States Regulatory Reporting
CA Prop65
This product does not contain any substances known to the State of California to cause cancer.
This product does not contain any substances known to the State of California to cause reproductive harm.

US State Right-To-Know Ingredients
None.
Canadian Regulations
Canadian Domestic Substance List
None.

Environmental
CERCLA
None.
Clean Water Section 307 Priority Pollutants
None.
Safe Drinking Water Act Maximum Contaminant Levels
None.

SECTION 16: OTHER INFORMATION

Abbreviations and acronyms
- 49CFR: Code of Federal Regulations, Title 49
- ACGIH: US. ACGIH Threshold Limit Values
- ATE: Acute toxicity estimate
- CAS-Nr.: Chemical Abstracts Service number
- CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act
- EINECS: European inventory of existing commercial substances
- ELINCS: European list of notified chemical substances
- IARC: International Agency for Research on Cancer
- IATA: International Air Transport Association
- IMDG: International Maritime Dangerous Goods
- N.O.S.: Not otherwise specified
- NTP: US. National Toxicology Program (NTP) Report on Carcinogens
- OECD: Organization for Economic Co-operation and Development
- TDG: Transportation of Dangerous Goods
- TWA: Time weighted average
- UN: United Nations
- WHO: World health organization

NFPA 704 (National Fire Protection Association):
- Health - 1
- Flammability - 1
- Instability - 0
- Others - none

- Health - 1
- Flammability - 1
- Physical Hazard - 0
- PPE -

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

Reason for Revision: The following sections have been revised: Section 3: Composition / Information on Ingredients. Reviewed and updated for general editorial purposes.

Revision Date: 01/24/2018

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