



# SAFETY DATA SHEET

## 1. Identification

**Product identifier** Custos  
**Other means of identification**  
**Product code** 10407  
**Recommended use** Agricultural/Horticultural Use- Fungicide- Refer to product label.  
**Recommended restrictions** Refer to product label

### Manufacturer/Importer/Supplier/Distributor information

#### Manufacturer

**Company name** D2BIO  
**Address** 15639 Trollope Court  
Moorpark  
CA 93021  
United States  
**Telephone** 1-805-209-9220  
**E-mail** [jm@d2bio.bio](mailto:jm@d2bio.bio)  
**Contact person** EH&S / Regulatory Department  
**Emergency phone number** CHEMTREC (24 hours):  
USA, Canada, Puerto Rico 1-800-424-9300  
Virgin Islands 1-800-424-9300  
International Maritime +1 (703)527-3887

## 2. Hazards identification

**Physical hazards** Not classified  
**Health hazards** Acute toxicity, oral Category 4  
Skin corrosion/irritation Category 2  
Serious eye damage/eye irritation Category 2  
Sensitization skin Category 1  
Specific target organ toxicity, single exposure Category 3 respiratory tract irritation  
**Environmental hazards** Not classified  
**OSHA define hazards** Not classified  
**Label elements**

**Signal word**



Warning

**Hazard statement**

Harmful if swallowed. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May cause respiratory irritation.

**Precautionary statement**

**Prevention**

Avoid breathing mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing must not be

	allowed out of the workplace. Wear eye protection/face protection. Wear protective gloves.
<b>Response</b>	If swallowed: Call a poison center/doctor if you feel unwell. Rinse mouth. If on skin: Wash with plenty of water. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison center/doctor if you feel unwell. If skin irritation or rash occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse.
<b>Storage</b>	Store in a well-ventilated place. Keep container tightly closed. Store locked up.
<b>Disposal</b>	Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Hazard(s) not otherwise Classified (HNOC)</b>	None known
<b>Supplemental information</b>	None

### 3. Composition/information on ingredients

#### Mixtures

<b>Chemical name</b>	<b>Common name and synonyms</b>	<b>CAS number</b>	<b>%</b>
Garlic Oil		8000-78-0	70 - < 80*
Rosemary Oil		8000-25-7	4
Peppermint Oil		8006-90-4	1
Other components below reportable levels			20 - < 30

\* Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

### 4. First-aid measures

<b>Inhalation</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
<b>Skin contact</b>	Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. Wash contaminated clothing before reuse.
<b>Eye contact</b>	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Rinse mouth. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical advice/attention if you feel unwell.
<b>Most important Symptoms/effects, acute and delayed</b>	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling and blurred vision. May cause respiratory irritation. Skin irritation. May cause redness and pain. May cause an allergic skin reactions. Dermatitis. Rash.

**Indication of immediate Medical attention and special treatment needed**  
**General information**

Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material (s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

## 5. Fire-Fighting measures

**Suitable extinguishing media** Water fog. Foam. Dry chemical powder. Carbon Dioxide (CO2).  
**Unsuitable extinguishing Media** Do not use water jet as an extinguisher, as this will spread the fire.

**Specific hazards arising from The chemical** During fire, gases hazardous to health may be formed.

**Special protective equipment And precautions for firefighters** Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

**Fire fighting equipment/instructions** Move containers from fire area if you can do so without risk.

**Specific methods** Use standard firefighting procedures and consider the hazards of other involved materials.

**General fire hazards** No unusual fire or explosion hazards noted.

## 6. Accidental release measures

**Personal precautions, Protective equipment and emergency procedures** Keep unnecessary personnel away. Keep people away from an upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

**Methods and material for Containment and cleaning up** Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

**Environmental precautions** Avoid discharge into drains, water courses or onto the ground.

## 7. Handling and storage

**Precautions for safe handling** Do not taste or swallow. Avoid breathing mist or vapor. Avoid contact with eyes, skin and clothing. When using, do not eat, drink or smoke. Provide adequate ventilation. Wear appropriate personal protective

equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

**Conditions for safe storage, Including any incompatibilities** Store locked up. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

**Occupational exposure limits** No exposure limits noted for ingredient(s).  
**Biological limit values** No biological exposure limits noted for ingredient(s)  
**Appropriate engineering controls** Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

### Individual protection measures, such as personal protective equipment

**Eye/face protection** Face shield is recommended. Wear safety glasses with side shields (or goggles)

**Skin protection**

**Hand protection** Wear appropriate chemical resistant clothing gloves. Suitable gloves can be recommended by the glove supplier.

**Other** Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

**Respiratory protection** In case of insufficient ventilation, wear suitable respiratory equipment. Chemical respirator with organic vapor cartridge.

**Thermal hazards** Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations** Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

## 9. Physical and chemical properties

**Appearance** Liquid

**Physical state** Liquid

**Form** Liquid

**Color** Brownish yellow

**Odor** Characteristic of Allium

**Odor threshold** Not available

**pH** 5 -7 (4% solution)

**Melting point/freezing point** Not available

**Initial boiling point and Boiling range** 282.2 °F (139°C) estimated

**Flash point** 219.2 °F (104°C) estimated

<b>Evaporation rate</b>	Not available
<b>Flammability (solid, gas)</b>	Not applicable
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit – lower %</b>	Not available
<b>Flammability limit – upper %</b>	Not available
<b>Explosive limit – lower %</b>	Not available
<b>Explosive limit – upper %</b>	Not available
<b>Vapor pressure</b>	Not available
<b>Vapor density</b>	Not available
<b>Relative density</b>	Not available
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Not available
<b>Partition coefficient (n-octano/water)</b>	Not available
<b>Auto-ignition temperature</b>	Not available
<b>Decomposition temperature</b>	Not available
<b>Viscosity</b>	Not available
<b>Other information</b>	
<b>Explosive properties</b>	Not explosive
<b>Flammability class</b>	Combustible IIIB estimated
<b>Oxidizing properties</b>	Not oxidizing
<b>Specific gravity</b>	1.03 estimated

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous Reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid</b>	Contact with incompatible materials
<b>Incompatible materials</b>	Strong oxidizing agents
<b>Hazardous decomposition Products</b>	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	May cause irritation to the respiratory system
<b>Skin contact</b>	Causes skin irritation. May cause an allergic skin reaction
<b>Eye contact</b>	Causes serious eye irritation
<b>Ingestion</b>	Harmful if swallowed
<b>Symptoms related to the Physical, chemical and toxicological characteristics</b>	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.

### Information on toxicological effects

**Acute Toxicity** In high concentrations, vapors are anesthetic and may cause headache, fatigue, dizziness and central nervous system effects. Harmful if swallowed. May cause respiratory irritation. May cause an allergic skin reaction.

<b>Product</b>	<b>Species</b>	<b>Test Results</b>
D2BIO CUSTOS		
<u><b>Acute</b></u>		
<b>Oral</b>		
LD50	Rat	1744 mg/kg estimated
<b>Components</b>	<b>Species</b>	<b>Test Results</b>
Garlic Oil (CAS 8000-78-0)		
Rosemary Oil		
Peppermint Oil		
<u><b>Acute</b></u>		
<b>Oral</b>		
LD50	Rat	1360 mg/kg

\*Estimates for product may be based on additional component data not shown

**Skin corrosion/irritation** Causes skin irritation

**Serious eye damage/eye** Causes serious eye irritation

**Irritation**

**Respiratory or skin sensitization**

**Respiratory sensitization** Not a respiratory sensitizer

**Skin sensitization** May cause an allergic skin reaction

**Germ cell mutagenicity** No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Carcinogenicity** This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA

**IARC Monographs. Overall Evaluation of Carcinogenicity**

Not listed

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not regulated

**US. National Toxicology Program (NTP) Report on Carcinogens**

Not listed

**Reproductive toxicity** This product is not expected to cause reproductive or developmental effects

**Specific target organ** May cause respiratory irritation

**Toxicity – single exposure**

**Specific target organ** Not classified

**Toxicity – repeated exposure**

**Aspiration hazard** Not an aspiration hazard

## 12. Ecological information

**Ecotoxicity** The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spill can have a harmful or damaging effect on the environment.

**Persistence and degradability** No data is available on the degradability of this product.

**Bioaccumulative potential** No data available  
**Mobility in soil** No data available  
**Other adverse effects** No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

### 13. Disposal considerations

**Disposal instructions** Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.  
**Local disposal regulations** Dispose in accordance with all applicable regulations.  
**Hazardous waste code** The waste code should be assigned in discussion between the user, the producer and the waste disposal company.  
**Waste from residues/unused products** Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).  
**Contaminated packaging** Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

### 14. Transport information

#### DOT

Not regulated as dangerous goods

#### IATA

Not regulated as dangerous goods

#### IMDG

Not regulated as dangerous goods

### 15. Regulatory information

**Us federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication standard, 29 CFR 1910.1200

#### **TSCA Section 12 (b) Export notification (40 CFR 707, Subpt. D)**

Not regulated

#### **CERCLA hazardous Substance List (40 CFR 302.4)**

Not listed

#### **SARA 304 Emergency release notification**

Not regulated

#### **OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not regulated

#### **Superfund Amendments and Reauthorization Act of 1986 (SARA)**

##### **Hazard categories**

Immediate Hazard – Yes

Delayed Hazard – No

Fire Hazard – No

Pressure Hazard – No

Reactivity Hazard – No

**SARA 302 Extremely hazardous substance**

Not listed

**SARA 311/312 Hazardous** No

**Chemical**

**SARA 313 (TRI reporting)**

Not regulated

**Other federal regulations**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CR 68.130)**

Not regulated

**Safe drinking Water Act** Not regulated

**(SDWA)**

**US state regulations**

**US. California Controlled Substances. CA department of Justice (California Health and Safety Code Section 11100)**

Not listed

**US. Massachusetts RTK – Substance List**

Not regulated

**US New Jersey Worker and Community Right-to-Know Act**

Not listed

**US Pennsylvania Worker and Community Right-to-Know Law**

Not listed

**US. Rhode Island RTK**

Not regulated

**US California Proposition 65**

California Safe drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

**International inventories**

**Country(s) or region**

**Inventory name/ on inventory (yes/no)**

Australia

Australian Inventory of Chemical Substances (AICS) / Yes

Canada

Domestic Substances List (DSL) / Yes

Canada

Non-Domestic Substances List (NDSL) / No

China

Inventory of Existing Chemical Substances in China(IECSC)/Yes

Europe

European Inventory of Existing Commercial Chemical Substances (EINECS) / No

Europe

European List of Notified Chemical Substances (ELINCS) / No

Japan

Inventory of Existing and New Chemical Substances (ENCS) / No

Korea

Existing Chemical List (ECL) / Yes

New Zealand

New Zealand Inventory / Yes

Philippines

Philippine Inventory of Chemicals and Chemical Substances (PICCS) / Yes

United States & Puerto Rico

Toxic Substances Control Act (TSCA) Inventory / Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)  
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s)

**16. Other information, including date of preparation or last revision**



**Issue date** 03-01-2019  
**Version** 01

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of Manufacturer's knowledge, information and belief at the date of its publication; however, it is provided only as a guidance for safe handling, use, processing, storage, transportation, disposal and release of the product. No warranties of any kind, either expressed or implied, including warranties of merchantability or fitness for a particular purpose, are made with respect to the Product or the information provided herein, or that the Product or information herein may be used without infringing the intellectual property rights or others. The information provided in this Safety Data Sheet relates only to the Specific Product designated and may not be valid if the Product is used in combination with other materials or in any process, unless specified herein. The user assumes all risk and liability for loss, injury, damage or expense due to any use, handling, storage or disposal of the Product, and Manufacturer recommends that the user conducts its own tests of the Product to determine suitability of the Product for user's particular use. D2BIO cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.