



United States
Material Safety Data Sheet

The Ortho Group
P.O. Box 190
Marysville, Ohio 43040
United States

24 h. EMERGENCY TELEPHONE NUMBER
CHEMTREC (U.S.) 1-800-424-9300
CHEMTREC (International) 1-703-527-3887
Non-Emergency Calls 1-937-644-0011

ORTHO FLOWER, FRUIT & VEGETABLE INSECT KILLER
CONCENTRATE

1. Product and company identification

MSDS # : 320000004594
EPA Registration Number: : 8033-107-239

2. Hazards identification

Physical state : liquid [liquid]
Color : Light yellow
Odor : Characteristic
Signal word : CAUTION!
OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Emergency Overview Harmful if swallowed.
Harmful if inhaled.
Harmful if absorbed through the skin.
Avoid contact with skin, eyes or clothing.
Avoid breathing dust, vapor or spray mist.
Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco.
Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

Potential acute health effects

Inhalation : No known significant effects or critical hazards.
Ingestion : No known significant effects or critical hazards.
Skin : No known significant effects or critical hazards.
Eyes : No known significant effects or critical hazards.
Target organs : Contains material which causes damage to the following organs:
upper respiratory tract
skin
eyes

Potential chronic health effects : See section 11 for more information.

Over-exposure signs/symptoms

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- Inhalation** : No specific data.
Ingestion : No specific data.
Skin : No specific data.
Eyes : No specific data.
Medical conditions aggravated by over-exposure : Pre-existing skin disorders may be aggravated by over-exposure to this product.
See toxicological information (Section 11)

3. Composition/information on ingredients

Name	CAS number	%
1,2,3-Propanetriol	56-81-5	>5 - <=10
Ethanol	64-17-5	>3 - <=5

4. First aid measures

- Eye contact** : Hold eye 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 treatment advice.
Skin contact : Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.
Inhalation : Move person 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.
Ingestion : 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.
Notes to physician : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5. Fire-fighting measures

- Flammability of the product** : In a fire or if heated, a pressure increase will occur and the container may burst.
- Extinguishing media**
- Suitable** : Use an extinguishing agent suitable for the surrounding fire.
Not suitable : None known.
- Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
 carbon dioxide
 carbon monoxide
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

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6. Accidental release measures

- Personal precautions** : Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Put on appropriate personal protective equipment (see Section 8).
- Environmental precautions** : To protect the environment, do not allow pesticide to enter or run-off into storm drains, drainage ditches gutters or surface waters

Methods for cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Dike spill area and do not allow product to reach soil, surface water, ground water or sewers. Contain and collect spillage with non-combustible, absorbent material and place in container for disposal.

7. Handling and storage

- Handling** : Avoid inhalation or contact with skin, eyes or clothing. Avoid container breakage. Do not contaminate water sources when disposing of equipment washwater or rinsate. Keep out of lakes, stream or ponds. Keep out of reach of children.
- Storage** : Keep from freezing. Store in original container in a cool, dry, well-ventilated area inaccessible to children and pets. Do not contaminate food or feedstuffs.

8. Exposure controls/personal protection

Occupational exposure limits

Ingredient	Exposure limits
1,2,3-Propanetriol	<p>OSHA PEL 1989 (1989-03-01) PEL: Permissible Exposure Level 10 mg/m3 Form: Total dust</p> <p>OSHA PEL 1989 (1989-03-01) PEL: Permissible Exposure Level 5 mg/m3 Form: Respirable fraction</p> <p>OSHA PEL (1993-06-30) PEL: Permissible Exposure Level 15 mg/m3 Form: Total dust</p> <p>OSHA PEL (1993-06-30) PEL: Permissible Exposure Level 5 mg/m3 Form: Respirable fraction</p> <p>NIOSH REL (1994-06-01) Notes: See Appendix D - Substances with no established RELs Form: Mist</p> <p>ACGIH TLV (1994-09-01) Notes: Inhalable fraction TLV-TWA: Threshold Limit Value - Time weighted average PEL: Permissible Exposure Level 10 mg/m3 Form: Inhalable fraction</p>
Ethanol	<p>OSHA PEL 1989 (1989-03-01) PEL: Permissible Exposure Level 1,900 mg/m3 , 1,000 ppm</p> <p>OSHA PEL (1993-06-30) PEL: Permissible Exposure Level</p>

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	1,900 mg/m ³ , 1,000 ppm NIOSH REL (1994-06-01) Time Weighted Average (TWA) 1,900 mg/m ³ , 1,000 ppm ACGIH TLV (2008-11-24) Notes: Confirmed animal carcinogen with unknown relevance to humans. TLV-STEL: Threshold Limit Value - Short Time Exposure Level , 1,000 ppm
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Consult local authorities for acceptable exposure limits.

- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.
- Engineering measures** : Use adequate ventilation to keep the airborne concentrations below the recommended exposure standard.
- Hygiene measures** : Wash thoroughly with soap and water after handling. Remove and launder contaminated clothing before reuse.

Personal protection

- Respiratory** : No special respiratory protection required. If ventilation is inadequate to keep the airborne concentrations below the recommended exposure standard wear appropriate respiration protection.
- Hands** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Eyes** : Protective eyewear is not required, but may be used in situations where contact is expected.
- Skin** : Wear long-sleeved shirt, long pants, shoes with socks. Remove and wash contaminated clothing before reuse.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. Physical and chemical properties

- Physical state** : liquid [liquid]
- Flash point** : Not Applicable
- Burning time** : Not Applicable
- Auto-ignition temperature** : Not Applicable
- Flammable limits** : Not Applicable
- Density** : 1.01 g/cm³
- Color** : Light yellow
- Odor** : Characteristic
- pH** : 6
- Boiling/condensation point** : Not Applicable
- Melting/freezing point** : Not Applicable
- Relative density** : Not Applicable
- Vapor pressure** : Not Applicable
- Vapor density** : Not Applicable

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Volatility	:	Not Applicable
Odor threshold	:	Not Applicable
Evaporation rate	:	Not Applicable
Viscosity	:	Not Applicable
Solubility	:	Not Applicable
Solubility in water	:	Not Applicable

10. Stability and reactivity

Chemical stability	:	The product is stable.
Conditions to avoid	:	Avoid exposure - obtain special instructions before use.
Incompatible materials	:	No specific data.
Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.

11. Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Product	LD50 Oral	Rat	> 2,000 mg/kg	-
Product	LD50 Dermal	Rabbit	> 2,000 mg/kg	-

Conclusion/Summary No known significant effects or critical hazards.

Irritation/Corrosion

Skin	Non-irritating
Eyes	Practically non-irritating
Respiratory	May cause respiratory irritation

Sensitizer

Conclusion/Summary	Skin	Not sensitizing
	Respiratory	Not sensitizing - based on the individual components.

Chronic toxicity

Conclusion/Summary No known significant effects or critical hazards.

Carcinogenicity

Conclusion/Summary No known significant effects or critical hazards.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
ethanol	A3	1				

Mutagenicity

Conclusion/Summary No known significant effects or critical hazards.

Teratogenicity

Product/ingredient name	Result	Species	Dose	Exposure
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Conclusion/Summary No known significant effects or critical hazards.

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Reproductive toxicity

Conclusion/Summary

No known significant effects or critical hazards.

12. Ecological information**Ecotoxicity** : This pesticide is toxic to wildlife.**Aquatic ecotoxicity**

Product/ingredient name	Result	Species	Exposure
Ethanol			
	Acute LC50 42 mg/l Fresh water	Fish - Rainbow trout, donaldson trout	4 d
	Acute EC50 > 100 mg/l Fresh water	Aquatic invertebrates. Water flea	2 d
	Acute EC50 > 10,000 - < 20,000 mg/l Fresh water	Aquatic plants - Green algae	4 d

Conclusion/Summary : No known significant effects or critical hazards.**Persistence/degradability****Conclusion/Summary** : No known significant effects or critical hazards.**Partition coefficient: n-octanol/water** : No known significant effects or critical hazards.**Other adverse effects** : No known significant effects or critical hazards.**13. Disposal considerations**

Waste disposal

Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. Transport information**Regulatory**

information	UN no.	Proper shipping name	Class	PG*	Note
DOT		Not Regulated			
IATA (C)		Not Regulated			
IATA (P)					
IMDG		Not Regulated			
TDG		Not Regulated			
PG* : Packing group					

15. Regulatory information**United States**

U.S. Federal regulations : **SARA 302/304/311/312 extremely hazardous substances:** No products were found.
SARA 302/304 emergency planning and notification: No products were found.

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SARA 302/304/311/312 hazardous chemicals: No products were found.

SARA 311/312 MSDS distribution - chemical inventory - hazard identification: 1,2,3-Propanetriol: Acu, Del Ethanol: Acu, Del, Fire hazard - flammable, combustible liquid, pyrophoric

Clean Water Act (CWA) 307: No products were found.

Clean Water Act (CWA) 311: The following components are listed: Potassium hydroxide (K(OH)) Sodium hydroxide (Na(OH))

Clean Air Act (CAA) 112 accidental release prevention: No products were found.

Clean Air Act (CAA) 112 regulated flammable substances: No products were found.

Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

United States inventory (TSCA 8b) : All components are listed or exempted.

State regulations

Massachusetts : The following components are listed: 1,2,3-Propanetriol Ethanol

New York : None of the components are listed.

New Jersey : The following components are listed: 1,2,3-Propanetriol Ethanol

Pennsylvania : The following components are listed: 1,2,3-Propanetriol Ethanol

California Prop. 65 : Not listed.

International regulations

Canada inventory : All components are listed or exempted.

International lists : **Australia inventory (AICS):** At least one component is not listed.
Japan inventory: At least one component is not listed.
China inventory (IECSC): At least one component is not listed.
Korea inventory: At least one component is not listed.
New Zealand Inventory of Chemicals (NZIoC): At least one component is not listed.
Philippines inventory (PICCS): At least one component is not listed.

16.Other information

Hazardous Material Information System (U.S.A.) :

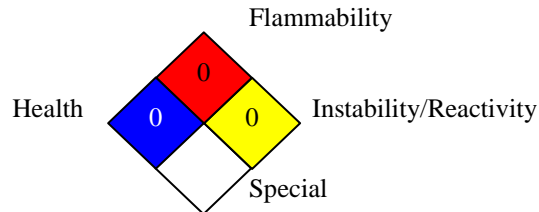
Health	1
Flammability	0
Physical hazards	0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented

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National Fire Protection Association (U.S.A.):



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