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

ORTHWO WEED B GON CHICKWEED, CLOVER & OXALIS KILLER FOR LAWNS

1. Product and company identification

MSDS # : 320000000382
EPA Registration Number : 239-2491

2. Hazards identification

Physical state : liquid [Clear liquid]
Color : Clear
Odor : None
Signal word : CAUTION!
OSHA/HCS status : While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.

Emergency Overview
Harmful if absorbed through the skin.
Causes moderate eye irritation.
Avoid contact with eyes, skin and clothing.
May cause skin sensitization.
When using this product, wear long-sleeved shirt, long pants, socks, shoes, and rubber gloves.

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 : None known.

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

Over-exposure signs/symptoms

Inhalation : No specific data.
Ingestion : No specific data.
Skin : No specific data.

Report version.Re
Version: Date of issue/Date of revision: Validity date***. Date of previous issue: 11/24/2013
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

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention if symptoms occur.
Skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if symptoms occur.
Inhalation : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention if symptoms occur.
Ingestion : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms occur.
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 : No specific data.
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.

6. Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put
Environmental precautions : Do not apply directly to water. 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. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

7. Handling and storage

Handling : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas.

Storage : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

Occupational exposure limits

No exposure standard allocated. 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. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Engineering measures : No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.
Hygiene measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Respiratory: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

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 were 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

<table>
<thead>
<tr>
<th>Physical state</th>
<th>liquid [Clear liquid]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash point</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Burning time</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Flammable limits</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Density</td>
<td>1.02 g/cm³</td>
</tr>
<tr>
<td>Color</td>
<td>Clear</td>
</tr>
<tr>
<td>Odor</td>
<td>None</td>
</tr>
<tr>
<td>pH</td>
<td>9.5</td>
</tr>
<tr>
<td>Boiling/condensation point</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Melting/freezing point</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.02</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Vapor density</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Volatility</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Solubility</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

10. Stability and reactivity

Chemical stability: The product is stable.
11. Toxicological information

**Acute toxicity**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>&gt; 5,000 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Product</td>
<td>LC50 Inhalation</td>
<td>Rat</td>
<td>&gt; 2 mg/l</td>
<td>-</td>
</tr>
<tr>
<td>Product</td>
<td>LD50 Dermal</td>
<td>Rat</td>
<td>&gt; 5,000 mg/kg</td>
<td>-</td>
</tr>
</tbody>
</table>

Conclusion/Summary: Very low toxicity to humans or animals.

**Irritation/Corrosion**

<table>
<thead>
<tr>
<th>Skin</th>
<th>Non-irritating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eyes</td>
<td>Moderate</td>
</tr>
<tr>
<td>Respiratory</td>
<td>May cause respiratory irritation</td>
</tr>
</tbody>
</table>

**Sensitizer**

<table>
<thead>
<tr>
<th>Skin</th>
<th>Not sensitizing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respiratory</td>
<td>Not sensitizing - based on the individual components.</td>
</tr>
</tbody>
</table>

**Chronic toxicity**

Conclusion/Summary: No known significant effects or critical hazards.

**Carcinogenicity**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conclusion/Summary</td>
<td>No known significant effects or critical hazards.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Mutagenicity**

Conclusion/Summary: No known significant effects or critical hazards.

**Teratogenicity**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conclusion/Summary</td>
<td>No known significant effects or critical hazards.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Reproductive toxicity**

Conclusion/Summary: No known significant effects or critical hazards.

12. Ecological information

**Ecotoxicity**

Conclusion/Summary: No known significant effects or critical hazards.

**Aquatic ecotoxicity**

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

<table>
<thead>
<tr>
<th>Regulatory information</th>
<th>UN no.</th>
<th>Proper shipping name</th>
<th>Class</th>
<th>PG*</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT</td>
<td></td>
<td>Not Regulated</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IATA (C)</td>
<td></td>
<td>Not Regulated</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IATA (P)</td>
<td></td>
<td>Not Regulated</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IMDG</td>
<td></td>
<td>Not Regulated</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TDG</td>
<td></td>
<td>Not Regulated</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

PG* : Packing group

15. Regulatory information

United States

U.S. Federal regulations : United States - TSCA 12(b) - Chemical export notification: None of the components are listed.
United States - TSCA 8(a) - Inventory update rule (IUR): Not determined
SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: No products were found.
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: No products were found.
Clean Air Act (CAA) 112 accidental release prevention: No products were found.

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

State regulations

Massachusetts : None of the components are listed.

New York : None of the components are listed.

New Jersey : The following components are listed: [(3,5,6-trichloro-2-}
(pyridyl)oxy]acetic acid, compound with triethylamine (1:1)

**Pennsylvania** : None of the components are listed.

**California Prop. 65** : Not listed

**International regulations**

**Canada inventory** : At least one component is not listed.

**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.
- **Taiwan inventory (CSNN)**: Not determined.
- **Malaysia Inventory (EHS Register)**: Not determined.

**16. Other information**

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

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>1</td>
</tr>
<tr>
<td>Flammability</td>
<td>0</td>
</tr>
<tr>
<td>Physical hazards</td>
<td>0</td>
</tr>
</tbody>
</table>

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 HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868. The customer is responsible for determining the PPE code for this material.

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

- Health 0
- Flammability 0
- Instability/Reactivity 0
- Special

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classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Date of printing : Print date
Date of issue : Validity date***.

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