



Latest revision date: 12/04/2015

Version: 1.4

United States  
**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 GROUND CLEAR VEGETATION KILLER READY TO USE1**

**Section 1. Identification**

**GHS product identifier** : ORTHO GROUND CLEAR VEGETATION KILLER READY TO USE1  
**Product type** : Pesticide  
**SDS #** : 320000003826  
**EPA Registration Number:** : 239-2716

**Relevant identified uses of the substance or mixture and uses advised against**

Use only in accordance with label directions.

**Section 2. Hazards identification**

This product is regulated by the Environmental Protection Agency (EPA) for label precautionary text see Section 15.

**OSHA/HCS status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).  
**Classification of the substance or mixture** : SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A

**GHS label elements**

**Hazard pictograms**



**Signal word**

: Warning

**Hazard statements**

: Causes serious eye irritation.

*Report  
version.Re  
port*

**Version:** version

**Date of issue/Date of revision:** Validity date\*\*\*

**Date of previous issue:** 10/08/2015

**Precautionary statements**

<b>General</b>	:	Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.
<b>Prevention</b>	:	Wear eye or face protection. Wash hands thoroughly after handling.
<b>Response</b>	:	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
<b>Storage</b>	:	Not applicable.
<b>Disposal</b>	:	Not applicable.
<b>Supplemental label elements</b>	:	None known.
<b>Hazards not otherwise classified</b>	:	None known.

**Section 3. Composition/information on ingredients**

<b>Substance/mixture</b>	:	Mixture
<b>Chemical name</b>	:	Not available.
<b>Other means of identification</b>	:	Not available.

<b>Ingredient name</b>	<b>%</b>	<b>CAS number</b>
Nonanoic acid	>= 3 - < 7	112-05-0
Caustic potash	>= 1 - < 3	1310-58-3

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional 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.

Occupational exposure limits, if available, are listed in Section 8.

**Section 4. First aid measures****Description of necessary first aid measures**

<b>Eye contact</b>	:	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
<b>Inhalation</b>	:	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.
<b>Skin contact</b>	:	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
<b>Ingestion</b>	:	Wash out mouth with water. If material has been swallowed and the

Report  
version.Re  
port

**Version:** version

**Date of issue/Date of revision:** Validity date\*\*\*.

**Date of previous issue:** 10/08/2015

exposed person is conscious, give small quantities of water to drink.  
 Do not induce vomiting unless directed to do so by medical personnel.  
 Get medical attention if adverse health effects persist or are severe.  
 Never give anything by mouth to an unconscious person.

### **Most important symptoms/effects, acute and delayed**

#### **Potential acute health effects**

**Eye contact** : Causes serious eye irritation.  
**Inhalation** : No known significant effects or critical hazards.  
**Skin contact** : No known significant effects or critical hazards.  
**Ingestion** : Irritating to mouth, throat and stomach.

#### **Over-exposure signs/symptoms**

**Eye contact** : Adverse symptoms may include the following:  
 pain or irritation  
 watering  
 redness  
**Inhalation** : No specific data.  
**Skin contact** : No specific data.  
**Ingestion** : No specific data.

#### **Indication of immediate medical attention and special treatment needed, if necessary**

**Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.  
**Specific treatments** : No specific treatment.  
  
**Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

## **Section 5. Fire-fighting measures**

#### **Extinguishing media**

**Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.  
**Unsuitable extinguishing media** : None known.

**Specific hazards arising from the chemical** : In a fire or if heated, a pressure increase will occur and the container may burst.  
**Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
 carbon dioxide  
 carbon monoxide  
 metal oxide/oxides

Report  
 version.Re  
 port

**Version:** version

**Date of issue/Date of revision:** Validity date\*\*\*.

**Date of previous issue:** 10/08/2015

- Special protective actions for fire-fighters** : 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.
- 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.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : 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. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### Methods and materials for containment and cleaning up

- Spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. 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. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Report  
version.Re  
port  
Version: version Date of issue/Date of revision: Validity date\*\*\*. Date of previous issue: 10/08/2015

- Advice on general occupational hygiene** : 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. See also Section 8 for additional information on hygiene measures.
- Conditions for safe storage, including any incompatibilities** : 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.

## Section 8. Exposure controls/personal protection

### Occupational exposure limits

Ingredient name	Exposure limits
Caustic potash	<b>OSHA PEL 1989 (1989-03-01)</b> <b>CEIL 2 mg/m<sup>3</sup></b> <b>NIOSH REL (1994-06-01)</b> <b>TWA 2 mg/m<sup>3</sup></b> <b>ACGIH TLV (1994-09-01)</b> <b>CEIL 2 mg/m<sup>3</sup></b>

- Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
- 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.

### Individual protection measures

- 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.
- Eye/face protection** : Protective eyewear.

### Skin protection

- Hand protection** : Protective gloves are not required, but may be used in situations were

Report  
version.Re  
port

Version: version

Date of issue/Date of revision: Validity date\*\*\*.

Date of previous issue: 10/08/2015

	significant contact is expected.
<b>Body protection</b>	: No special protective clothing is required.
<b>Other skin protection</b>	: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
<b>Respiratory protection</b>	: 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.

## Section 9. Physical and chemical properties

### Appearance

<b>Physical state</b>	: liquid [liquid]
<b>Color</b>	: Light yellow
<b>Odor</b>	: Characteristic
<b>Odor threshold</b>	: Not available.
<b>pH</b>	: 7.3
<b>Melting point</b>	: Not available.
<b>Boiling point</b>	: Not available.
<b>Flash point</b>	: > 200 °F (93.33 °C)
<b>Evaporation rate</b>	: Not available.
<b>Flammability (solid, gas)</b>	: Not available.
<b>Lower and upper explosive (flammable) limits</b>	: <b>Lower:</b> Not available. <b>Upper:</b> Not available.
<b>Vapor pressure</b>	: Not available.
<b>Vapor density</b>	: Not available.
<b>Relative density</b>	: Not available.
<b>Solubility</b>	: Not available.
<b>Partition coefficient: n-octanol/water</b>	: Not available.
<b>Auto-ignition temperature</b>	: Not available.
<b>Decomposition temperature</b>	: Not available.
<b>Viscosity</b>	: <b>Dynamic:</b> Not available. <b>Kinematic:</b> Not available.

## Section 10. Stability and reactivity

<b>Reactivity</b>	: No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability</b>	: The product is stable.
<b>Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will

Report  
version.Re  
port

**Version:** version

**Date of issue/Date of revision:** Validity date\*\*\*.

**Date of previous issue:** 10/08/2015

Conditions to avoid : not occur.  
 Incompatible materials : No specific data.  
 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
	LD50 Oral	Rat	> 5,000 mg/kg	-
	LC50 Inhalation	Rat	> 5.4 mg/l	4 h
	LD50 Dermal	Rat	5,000 mg/kg	-

Conclusion/Summary : Toxic to humans or animal life.

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
	Eyes - Redness of the conjunctivae	Rabbit	> 2.0		-
	Skin - Erythema/Es char	Rabbit	< 1.0		-

#### Conclusion/Summary

Skin : Slight  
 Eyes : Moderate  
 Respiratory : May cause respiratory irritation

#### Sensitization

Product/ingredient name	Route of exposure	Species	Result
	Skin	Guinea pig	Not sensitizing

#### Conclusion/Summary

Skin : Not sensitizing  
 Respiratory : Not sensitizing - based on the individual components.

#### Mutagenicity

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

Report  
 version.Re  
 port

Version: version

Date of issue/Date of revision: Validity date\*\*\*.

Date of previous issue: 10/08/2015

**Carcinogenicity**

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

**Reproductive toxicity**

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

**Teratogenicity**

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

**Specific target organ toxicity (single exposure)**

Not available.

**Specific target organ toxicity (repeated exposure)**

Not available.

**Aspiration hazard**

Not available.

**Information on the likely routes of exposure** : Not available.

**Potential chronic health effects**

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

**General** : No known significant effects or critical hazards.  
**Carcinogenicity** : No known significant effects or critical hazards.  
**Mutagenicity** : No known significant effects or critical hazards.  
**Teratogenicity** : No known significant effects or critical hazards.  
**Developmental effects** : No known significant effects or critical hazards.  
**Fertility effects** : No known significant effects or critical hazards.

**Section 12. Ecological information****Toxicity**

**Conclusion/Summary** : Not available.

**Persistence and degradability**

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

**Mobility in soil**

Report  
version.Re  
port

**Version:** version

**Date of issue/Date of revision:** Validity date\*\*\*.

**Date of previous issue:** 10/08/2015



**Soil/water partition coefficient (KOC)** : Not available.

**Other adverse effects** : No known significant effects or critical hazards.

## Section 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

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

## Section 15. Regulatory information

### Precautionary statements

**Signal word** : WARNING!

**Emergency Overview** : Keep out of reach of children.  
Causes substantial but temporary eye injury.  
Do not get in eyes, or on skin or clothing.  
Wear safety glasses.  
Wash thoroughly after handling.

**U.S. Federal regulations** : **United States inventory (TSCA 8b):**  
Not determined.

*Report version.Re port*

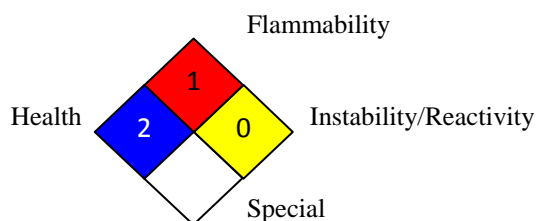
**Version:** *version*      **Date of issue/Date of revision:** *Validity date\*\*\*.*      **Date of previous issue:** *10/08/2015*

**State regulations****California Prop. 65**

Not available.

**International lists****National inventory**

<b>Australia</b>	:	At least one component is not listed.
<b>Canada</b>	:	At least one component is not listed.
<b>China</b>	:	At least one component is not listed.
<b>Europe</b>	:	At least one component is not listed.
<b>Japan</b>	:	At least one component is not listed.
<b>Malaysia</b>	:	Not determined.
<b>New Zealand</b>	:	At least one component is not listed.
<b>Philippines</b>	:	At least one component is not listed.
<b>Republic of Korea</b>	:	At least one component is not listed.
<b>Taiwan</b>	:	Not determined.

**Section 16. Other information****National Fire Protection Association (U.S.A.):**

Reprinted with permission from NFPA 704-2001, Identification of the Hazards of Materials for Emergency Response Copyright ©1997, National Fire Protection Association, Quincy, MA 02269. This reprinted material is not the complete and official position of the National Fire Protection Association, on the referenced subject which is represented only by the standard in its entirety.

Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended 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.

**Procedure used to derive the classification**

<b>Classification</b>	<b>Justification</b>
H319	On basis of test data

Report  
version.Re  
port

Version: version

Date of issue/Date of revision: Validity date\*\*\*.

Date of previous issue: 10/08/2015

### History

**Date of issue/Date of revision** : Validity date\*\*\*.  
**Version** : 1.4

### Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Report  
version.Re  
port

**Version:** version

**Date of issue/Date of revision:** Validity date\*\*\*.

**Date of previous issue:** 10/08/2015