



Latest revision date: 07/26/2019

Version: 1.0

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 WEED & GRASS KILLER SUPER  
CONCENTRATE**

### Section 1. Identification

**GHS product identifier** : ORTHO GROUND CLEAR WEED & GRASS KILLER SUPER  
CONCENTRATE  
**Product type** : Pesticide  
**SDS #** : 320000012272  
**EPA Registration Number:** : 100-1344-239

**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** : SKIN SENSITIZATION - Category 1  
TOXIC TO REPRODUCTION (Unborn child) - Category 2  
SPECIFIC TARGET ORGAN TOXICITY (REPEATED  
EXPOSURE) - Category 1

**GHS label elements**

**Hazard pictograms** :



**Signal word** :

Warning

**Hazard statements** : May cause an allergic skin reaction.  
Suspected of damaging the unborn child.  
Causes damage to organs through prolonged or repeated exposure.

**Precautionary statements**

**General** : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

**Prevention** : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Do not breathe vapor. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace.

**Response** : Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention.

**Storage** : Store locked up.

**Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Supplemental label elements** : None known.

**Hazards not otherwise classified** : None known.

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

**Substance/mixture** : Mixture

**Chemical name** : Not available.

**Other means of identification** : Not available.

Ingredient name	%	CAS number
Dipyrido[1,2-a:2',1'-c]pyrazinediium, 6,7-dihydro-, dibromide	> 0 - <= 3	85-00-7
fluazifop-P-butyl (ISO)	> 0 - <= 1	79241-46-6

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**

**Eye contact** : 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 following exposure or if feeling unwell.

- Inhalation** : 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 unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.
- Skin contact** : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. If material has been swallowed and the 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. Never give anything by mouth to an unconscious person.

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

**Potential acute health effects**

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : May cause an allergic skin reaction.
- Ingestion** : No known significant effects or critical hazards.

**Over-exposure signs/symptoms**

- Eye contact** : No specific data.
- Inhalation** : Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

**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. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

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** : No specific data.
- 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 specialized 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). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. 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.
- 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. Store locked up. 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
Dipyrido[1,2-a:2',1'-c]pyrazinediium, 6,7-dihydro-, dibromide	<b>OSHA PEL 1989 (1989-03-01)</b> TWA 0.5 mg/m <sup>3</sup> <b>NIOSH REL (1994-06-01)</b> TWA 0.5 mg/m <sup>3</sup>
fluazifop-P-butyl (ISO)	None.

- Appropriate engineering controls** : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

**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. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : Protective eyewear is not required, but may be used in situations where contact is expected.

**Skin protection**

**Hand protection** : 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. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

**Body protection** : No special protective clothing is required.

**Other skin protection** : 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.

**Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

**Section 9. Physical and chemical properties**

**Appearance**

**Physical state** : liquid [emulsion]  
**Color** : Dark brown

**Odor** : Characteristic  
**Odor threshold** : Not available.  
**pH** : 5.4

**Melting point** : Not available.  
**Boiling point** : Not available.  
**Flash point** : Not available.

Evaporation rate	:	Not available.
Flammability (solid, gas)	:	Not available.
Lower and upper explosive (flammable) limits	:	<b>Lower:</b> Not available. <b>Upper:</b> Not available.
Vapor pressure	:	Not available.
Vapor density	:	Not available.
Relative density	:	1.025 g/cm <sup>3</sup>
Solubility	:	Not available.
Partition coefficient: n-octanol/water	:	Not available.
Auto-ignition temperature	:	Not available.
Decomposition temperature	:	Not available.
Viscosity	:	<b>Dynamic:</b> Not available. <b>Kinematic:</b> Not available.

## Section 10. Stability and reactivity

Reactivity	:	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	:	The product is stable.
Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	:	No specific data.
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 mg/l	4 h
	LC50 Dermal	Rat	> 5,000 mg/kg	-

Conclusion/Summary : Not available.

#### Irritation/Corrosion

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

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**Conclusion/Summary**

**Skin** : Not available.  
**Eyes** : Not available.  
**Respiratory** : Not available.

**Sensitization**

Product/ingredient name	Route of exposure	Species	Result
	Skin	Guinea pig	Sensitizing

**Conclusion/Summary**

**Skin** : Not available.  
**Respiratory** : Not available.

**Mutagenicity**

**Conclusion/Summary** : Not available.

**Carcinogenicity**

**Conclusion/Summary** : Not available.

**Reproductive toxicity**

**Conclusion/Summary** : Not available.

**Teratogenicity**

**Conclusion/Summary** : Not available.

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

Product/ingredient name	Category	Route of exposure	Target organs
Dipyrido[1,2-a:2',1'-c]pyrazinediium, 6,7-dihydro-, dibromide			

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

Product/ingredient name	Category	Route of exposure	Target organs
Dipyrido[1,2-a:2',1'-c]pyrazinediium, 6,7-dihydro-, dibromide			

**Aspiration hazard**

Not available.

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



**Potential chronic health effects**

- Conclusion/Summary** : Not available.
- General** : Causes damage to organs through prolonged or repeated exposure. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : Suspected of damaging the unborn child.
- 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** : Not available.

**Mobility in soil**

- 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)	3082	Environmentally hazardous substance, liquid, n.o.s. (diquat dibromide) (fluazifop-P-butyl (ISO))	9	(, III)	
IATA (P)	3082	Environmentally hazardous substance, liquid, n.o.s. (diquat dibromide) (fluazifop-P-butyl (ISO))	9	(, III)	
IMDG	3082	Environmentally hazardous substance, liquid, n.o.s. (diquat dibromide) (fluazifop-P-butyl (ISO))	9	(, III)	

PG\* : Packing group

## Section 15. Regulatory information

### Precautionary statements

- Signal word** : CAUTION!
- Emergency Overview** : Keep out of reach of children and pets.  
Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.  
Avoid contact with skin and clothing.  
Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco.

- U.S. Federal regulations** : **United States inventory (TSCA 8b):**  
At least one component is not listed.

### State regulations

**California Prop. 65**  
Not available.

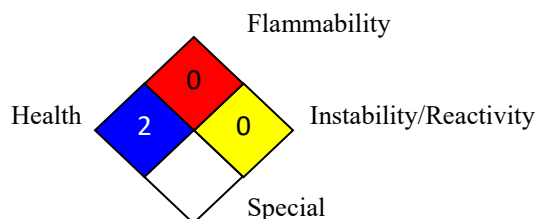
### International lists

#### National inventory

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

## Section 16. Other information

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



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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

Classification	Justification
H317	On basis of test data
H361 (Unborn child)	Calculation method
H372	Calculation method

### History

Date of issue/Date of revision : 07/26/2019  
Version : 1.0

### Notice to reader

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