



# SAFETY DATA SHEET

## Great Lakes PHT4-Diol™

Version: 1.1

Revision Date: 03/31/2015

Print Date: 07/21/2015

### SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Great Lakes PHT4-Diol™

Product Use Description: Flame retardants

Synonyms: Brominated flame retardant

Company: Chemtura Corporation  
199 Benson Road  
Middlebury, CT  
06749  
United States of America  
  
Telephone: (US) +1 866-430-2775

Emergency telephone number: CHEMTREC: (24 hours) 800-424-9300  
:  
Chemtura Corporation Emergency Response: CHEMTURA : 800-292-5898  
  
For additional emergency telephone numbers see section 16 of the Safety Data Sheet.

Prepared by Product Safety Department  
(US) +1 866-430-2775  
  
MSDSRequest@chemtura.com

Recommended use of the chemical and restrictions on use

Recommended use : Flame retardants

Restrictions on use : Industrial use

### SECTION 2. HAZARDS IDENTIFICATION

Form	viscous liquid
Colour	light brown
Odour	mild

#### GHS Classification

Acute aquatic toxicity : Category 3

#### GHS Label element

Hazard statements : H402 Harmful to aquatic life.



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## Great Lakes PHT4-Diol™

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Other hazards : None

Precautionary statements : **Prevention:**  
P273 Avoid release to the environment.  
**Disposal:**  
P501 Dispose of contents/ container to an approved waste disposal plant.

Self-ignitable : No data available

### Carcinogenicity:

#### IARC

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

#### OSHA

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

#### NTP

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

### Hazardous components

Chemical Name	CAS-No.	Concentration (%)
2,2'-oxydiethanol	111-46-6	>= 5 - < 10 %

## SECTION 4. FIRST AID MEASURES

If inhaled : Remove to fresh air.  
Obtain medical attention.

In case of skin contact : Wash off with soap and water.  
Wash off immediately with plenty of water for at least 15 minutes.  
Get medical attention if irritation develops and persists.

In case of eye contact : Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Get medical attention.

If swallowed : If conscious, make the victim drink the following:  
Drink 1 or 2 glasses of water.  
Get medical attention immediately.

Most important symptoms and effects, both acute and delayed : None known.



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Notes to physician : For specialist advice physicians should contact the Poisons Information Service.

### SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Specific hazards during firefighting : Burning produces irritant fumes. Exposure to decomposition products may be a hazard to health.

Specific extinguishing methods : The product itself does not burn.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

### SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.

Environmental precautions : Should not be released into the environment.

Methods and materials for containment and cleaning up : Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal. Pick up and transfer to properly labelled containers. Clean contaminated surface thoroughly. Flush with water. Do not flush into surface water or sanitary sewer system.

### SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing. Do not breathe vapours or spray mist. Use only with adequate ventilation.

Conditions for safe storage : Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in a cool place away from bases.

Materials to avoid : Bases, Acids, Oxidizing agents



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### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters

Components	CAS-No.	Form of exposure	Permissible concentration	Basis
2,2'-oxydiethanol	111-46-6	TWA	10 mg/m3	US WEEL

**Engineering measures** : Effective exhaust ventilation system  
Ensure that eyewash stations and safety showers are close to the workstation location.

#### Personal protective equipment

**Respiratory protection** : Breathing apparatus needed only when aerosol or mist is formed.  
In the case of vapour formation use a respirator with an approved filter.  
Respirator with a vapour filter (EN 141)

**Hand protection**  
**Remarks** : Rubber gloves Neoprene gloves

**Eye protection** : Safety glasses with side-shields  
Tightly fitting safety goggles

**Skin and body protection** : impervious clothing

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance** : viscous liquid

**Color** : light brown

**Odor** : mild

**Odour Threshold** : No data available

**pH** : Not applicable

**Melting point/range** :  
Not applicable

**Boiling point/boiling range** : Decomposition: yes  
No data available

**Evaporation rate** : No data available

**Flash point** :  
No data available

**Auto-flammability** : No data available



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Upper explosion limit	: No data available
Lower explosion limit	: No data available
Vapour pressure	: 0.001 hPa (60 °C)
Relative vapour density	: 21.6
Relative density	: 1.9
Density	: No data available
<u>Solubility(ies)</u>	
Water solubility	: No data available
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Thermal decomposition	: No data available
Viscosity	
Viscosity, dynamic	: 90,000 mPa.s (25 °C)
Viscosity, kinematic	: No data available

#### SECTION 10. STABILITY AND REACTIVITY

Reactivity	: No dangerous reaction known under conditions of normal use.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: Hazardous polymerisation does not occur. Potential for exothermic hazard
Conditions to avoid	: Exposure to moisture. Contamination
Incompatible materials	: Bases Acids Oxidizing agents
Hazardous decomposition products	: Hydrogen halides Bromine Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).



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#### SECTION 11. TOXICOLOGICAL INFORMATION

Acute oral toxicity (Product) : LD50: > 10,000 mg/kg  
Species: Rat

Acute inhalation toxicity  
2,2'-oxydiethanol (Component) : LC50: > 4.4 mg/l  
Exposure time: 4 h  
Species: Rat  
Remarks: An LC50/inhalation/4h/rat could not be determined because no mortality of rats was observed at the maximum achievable concentration.

Acute dermal toxicity (Product) : LD50: > 20,000 mg/kg  
Species: Rabbit

Skin irritation (Product) : Species: Rabbit  
Result: No skin irritation

Eye irritation (Product) : Species: Rabbit  
Result: No eye irritation

Aspiration toxicity (Product) : No aspiration toxicity classification

Genotoxicity in vitro (Product) : Ames test  
negative

Further information (Product) : Health injuries are not known or expected under normal use.

#### SECTION 12. ECOLOGICAL INFORMATION

##### Ecotoxicity effects

Toxicity to fish (Product) : LC50: 12 mg/l  
Exposure time: 96 h  
Species: Lepomis macrochirus (Bluegill sunfish)

(Product) : NOEC: < 10 mg/l  
Exposure time: 96 h  
Species: Lepomis macrochirus (Bluegill sunfish)



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Toxicity to daphnia and other aquatic invertebrates  
2,2'-oxydiethanol : EC50: > 84,770 mg/l  
(Component) Exposure time: 48 h  
Species: Daphnia magna (Water flea)

### Elimination information (persistence and degradability)

Bioaccumulation (Product) : Remarks:  
Bioaccumulation is unlikely.

Mobility (Product) : Remarks:  
No data available

Biodegradability (Product) : Result: No data available

### Further information on ecology

#### Ecotoxicology Assessment

Results of PBT assessment (Product)  
This substance is not considered to be persistent, bioaccumulating and toxic (PBT).  
Additional ecological : Avoid release to the environment.  
information (Product)

## SECTION 13. DISPOSAL CONSIDERATIONS

### Disposal methods

Waste from residues : In accordance with local and national regulations.

## SECTION 14. TRANSPORT INFORMATION

### ADR

Not dangerous goods

### RID

Not dangerous goods

### MERCOSUR

Not dangerous goods

### DOT

Not dangerous goods

### IATA



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Not dangerous goods

### IMDG

Not dangerous goods

## SECTION 15. REGULATORY INFORMATION

**TSCA list** : Not relevant  
Not relevant

### EPCRA - Emergency Planning and Community Right-to-Know Act

#### CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

#### SARA304 Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

**SARA 311/312 Hazards** : No SARA Hazards

**SARA 302** : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313** : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**California Prop 65** This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

#### The components of this product are reported in the following inventories:

<b>US.TSCA</b>	On TSCA Inventory
<b>DSL</b>	All components of this product are on the Canadian DSL.
<b>AICS</b>	On the inventory, or in compliance with the inventory
<b>NZIoC</b>	Not in compliance with the inventory
<b>ENCS</b>	Not in compliance with the inventory
<b>KECI</b>	On the inventory, or in compliance with the inventory
<b>PICCS</b>	On the inventory, or in compliance with the inventory
<b>IECSC</b>	On the inventory, or in compliance with the inventory

## SECTION 16. OTHER INFORMATION

### Further information

#### Other Emergency Phone Number

<u>Latin America:</u>	Brazil	+55 113 711 9144
	All other countries	+44 (0) 1235 239 670





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Mexico:		+52 555 004 8763
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