



SAFETY DATA SHEET

Great Lakes PHT4-Diol™ LV

Version 1.0

Revision Date 10/17/2016

Print Date 10/17/2016

SECTION 1. IDENTIFICATION

Product name: Great Lakes PHT4-Diol™ LV

Product Use Description: Fire retardant

Company: Chemtura Canada Co./Cie
25 ERB STREET
Elmira, Ontario
N3B 3A3
Canada

Telephone: (US) +1 866-430-2775

Emergency telephone number: :
CHEMTREC: (24 hours) 800-424-9300

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 : Fire retardant

Restrictions on use : Restricted to professional users.

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Acute aquatic toxicity : Category 3

GHS label elements

Hazard statements : H402 Harmful to aquatic life.

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

Other hazards

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None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**Hazardous components**

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

SECTION 4. FIRST AID MEASURES

- If inhaled : Remove to fresh air.
Get medical attention.
- In case of skin contact : Wash skin thoroughly with soap and water for at least 15 minutes.
If skin irritation occurs: Get medical advice/ attention.
- 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.
- 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 fire-fighting : Burning produces noxious and toxic fumes.
Thermal decomposition can lead to release of irritating gases and vapours.
- 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, protec- : Use personal protective equipment.

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tive equipment and emergency procedures

Environmental precautions : Avoid release to the environment.

Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Pick up and transfer to properly labelled containers.
Clean contaminated surface thoroughly.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Handle in accordance with good industrial hygiene and safety practice.
Use personal protective equipment as required.
Avoid contact with skin, eyes and clothing.
Do not breathe vapours or spray mist.
Use only in well-ventilated areas.

Conditions for safe storage : Keep in a dry, cool and well-ventilated place.
Keep container tightly closed.
Protect from contamination.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Components with workplace control parameters**

Contains no substances with occupational exposure limit values.

Engineering measures : Use with local exhaust ventilation.

Personal protective equipment

Respiratory protection : In the case of vapour formation use a respirator with an approved filter.
Respirator with filter for organic vapour

Hand protection

Remarks : Rubber gloves Neoprene gloves

Eye protection : Safety glasses with side-shields
or
Safety goggles

Skin and body protection : Impervious clothing

Hygiene measures : Wash thoroughly after handling.
Wash contaminated clothing before reuse.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES



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Appearance	: liquid
Colour	: light brown
Odour	: mild
Odour Threshold	: No data available
pH	: Not applicable
Melting point/range	: Not applicable
Boiling point/boiling range	: Decomposes
Flash point	: The product is not flammable.
Evaporation rate	: No data available
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
Solubility(ies)	
Water solubility	: < 0.1 mg/l
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	
Viscosity, dynamic	: 20,000 - 30,000 mPa.s (25 °C)
Viscosity, kinematic	: No data available
Self-Accelerating decomposition temperature (SADT)	: Method: No information available.
Oxidizing potential	: No information available.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: No dangerous reaction known under conditions of normal use.
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Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: Hazardous polymerisation does not occur.
Conditions to avoid	: High temperatures.
Incompatible materials	: Acids Bases Oxidizing agents
Hazardous decomposition products	: Carbon oxides Hydrogen bromide

SECTION 11. TOXICOLOGICAL INFORMATION**Acute toxicity****Product:**

Acute oral toxicity	: LD50 (Rat, male and female): > 5,000 mg/kg
Acute dermal toxicity	: LD50 (Rabbit, male and female): > 5,000 mg/kg

Components:**2,2'-oxydiethanol:**

Acute oral toxicity	: LD50 (Rat): 12,565 - 30,210 mg/kg
Acute inhalation toxicity	: LC50 (Rat): > 4.4 mg/l Exposure time: 4 h Assessment: The substance or mixture has no acute inhalation toxicity 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	: LD50 (Rabbit): 12,500 - 13,300 mg/kg

Skin corrosion/irritation**Product:**

Species: Rabbit
Exposure time: 24 h
Result: No skin irritation

Serious eye damage/eye irritation**Product:**

Species: Rabbit
Result: No eye irritation

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Germ cell mutagenicity**Product:**

Genotoxicity in vitro : Test Type: Ames test
Result: negative

Aspiration toxicity**Product:**

No aspiration toxicity classification

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Product:**

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 12 mg/l
Exposure time: 96 h
Test Type: static test

Components:**2,2'-oxydiethanol:**

Toxicity to fish : LC50 (Fish): 75,200 mg/l
Exposure time: 96 h

LC50 (Fish): > 32,000 mg/l
Exposure time: 96 h

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

Persistence and degradability**Product:**

Biodegradability : Result: Not readily biodegradable.

Bioaccumulative potential**Components:****2,2'-oxydiethanol:**

Partition coefficient: n- : log Pow: -2
octanol/water

Mobility in soil**Product:**

Mobility : Remarks: No data available

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Other adverse effects**Product:**

Results of PBT and vPvB assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT).

Additional ecological information : Avoid release to the environment.

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

Waste from residues : Do not dispose of waste into sewer.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION**International Regulations****UNRTDG**

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations**TDG**

Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION**The components of this product are reported in the following inventories:**

United States TSCA Inventory : On TSCA Inventory

Canadian Domestic Substances List (DSL) : All components of this product are on the Canadian DSL

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- Australia Inventory of Chemical Substances (AICS) : On the inventory, or in compliance with the inventory
- New Zealand. Inventory of Chemical Substances : Not in compliance with the inventory
1,2-Benzenedicarboxylic acid, 3,4,5,6-tetrabromo-, mixed esters with diethylene glycol and propylene glycol
- Japan. ENCS - Existing and New Chemical Substances Inventory : Not in compliance with the inventory
1,2-Benzenedicarboxylic acid, 3,4,5,6-tetrabromo-, mixed esters with diethylene glycol and propylene glycol
- Korea. Korean Existing Chemicals Inventory (KECI) : On the inventory, or in compliance with the inventory
- Philippines Inventory of Chemicals and Chemical Substances (PICCS) : On the inventory, or in compliance with the inventory
- China. Inventory of Existing Chemical Substances in China (IECSC) : On the inventory, or in compliance with the inventory

Canadian lists

Canada. Canadian Environmental Protection Act (CEPA). WHMIS Ingredient Disclosure List (Can. Gaz., Part II, Vol. 122, No. 2): WHMIS Ingredient Disclosure List IDL: No component is listed on the WHMIS ingredients disclosure list.

Canada. Canadian Environmental Protection Act (CEPA). National Pollutant Release Inventory (NPRI) (Can. Gaz. Part I, 135:12, 940): Canadian National Pollutant Release Inventory (NPRI): No component is listed on NPRI.

SECTION 16. OTHER INFORMATION**Other Emergency Phone Number**

<u>Latin America:</u>	Brazil	+55 113 711 9144
	All other countries	+44 (0) 1235 239 670
<u>Mexico:</u>		+52 555 004 8763

Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; CPR - Controlled Products Regulations; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response

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Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

Revision Date : 10/17/2016

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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