



Ecopol-CL12

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date: 09/11/2013

Supersedes:01/09/2012

Version: 1.0

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY

Product Identifier

Product form: Mixture

Product name: Ecopol-CL12

Synonyms: Delayed Zirconate Crosslinker

Intended Use Of The Product

Use of the substance/mixture: Crosslinker. For professional use only.

For professional use only

Name, Address, And Telephone Of The Responsible Party

Economy® Polymers & Chemicals

435 E. Anderson Road

77047 Houston, TX

T 713-723-8416, 1-800-231-2066

www.economypolymers.com

Emergency Telephone Number

Emergency number : CHEMTREC 1-800-424-9300 (US); 703-527-3887 (International, collect calls are accepted)

SECTION 2: HAZARDS IDENTIFICATION

Classification Of The Substance Or Mixture

GHS-US classification

Flam. Liq. 2 H225

Acute Tox. 3 (Oral) H301

Acute Tox. 3 (Dermal) H311

Acute Tox. 3 (Inhalation:vapour) H331

STOT SE 1 H370

Label Elements

GHS-US labeling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : H225 - Highly flammable liquid and vapour.

H301 - Toxic if swallowed.

H311 - Toxic in contact with skin.

H331 - Toxic if inhaled.

H370 - Causes damage to organs.

Precautionary statements (GHS-US) : P210 - Keep away from heat, sparks, open flames, hot surfaces. - No smoking.

P233 - Keep container tightly closed.

P240 - Ground/bond container and receiving equipment.

P241 - Use explosion-proof electrical, ventilating, and lighting equipment.

P242 - Use only non-sparking tools.

P243 - Take precautionary measures against static discharge.

P260 - Do not breathe vapors, mist, spray.

P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.

P270 - Do not eat, drink or smoke when using this product.

P271 - Use only outdoors or in a well-ventilated area.

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P280 - Wear protective gloves, protective clothing, eye protection, face protection, insufficient ventilation: respiratory protection.
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor.
P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P311 - Call a POISON CENTER or doctor.
P312 - Call a POISON CENTER or doctor if you feel unwell.
P321 - Specific treatment (see section 4).
P330 - If swallowed, rinse mouth.
P361 - Remove/Take off immediately all contaminated clothing.
P363 - Wash contaminated clothing before reuse.
P370+P378 - In case of fire: Use appropriate media for extinction.
P403+P233 +P235- Store in a well-ventilated place. Keep container tightly closed. Keep cool
P501 - Dispose of contents/container according to local, regional, national, territorial, provincial, and international regulations.

Other Hazards Not available

Unknown acute toxicity (GHS US) 25% of this mixture has unknown acute toxicity.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Name	Product Identifier	% (w/w)	GHS-US classification
Methyl alcohol	(CAS No.) 67-56-1	40 - 50	Flam. Liq. 2, H225 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation:vapour), H331 STOT SE 1, H370
Triethanolamine	(CAS No.) 102-71-6	15 - 25	Not classified
Isopropyl alcohol	(CAS No.) 67-63-0	7 - 13	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 STOT SE 3, H336

Full text of H-phrases: see section 16

SECTION 4: FIRST AID MEASURES

Description Of First Aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). IF exposed or concerned: Call a POISON CENTER or doctor/physician.

Inhalation: When symptoms occur: go into open air and ventilate suspected area. IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician.

Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Wash contaminated clothing before reuse. Call a POISON CENTER/doctor/physician if you feel unwell.

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if pain, blinking or redness persist.

Ingestion: Rinse mouth. Do NOT induce vomiting. Get immediate medical attention.

Most Important Symptoms And Effects Both Acute and Delayed

General: Causes damage to organs

Inhalation: Toxic if inhaled. Respiratory tract irritation.

Skin Contact: Toxic in contact with skin. Causes skin irritation.

Eye Contact: May cause eye irritation

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Ingestion: Toxic if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

Indication Of Any Immediate Medical Attention And Special Treatment Needed

If exposed or concerned, get medical advice and attention.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing Media

Suitable extinguishing media: Dry chemical, carbon dioxide, water spray, foam, fog.

Unsuitable extinguishing media: Do not use extinguishing media containing water. Use of heavy stream of water may spread fire

Special Hazards Arising From The Substance Or Mixture

Fire hazard: Highly flammable liquid and vapour.

Explosion hazard: May form flammable/explosive vapour-air mixture.

Reactivity: Hazardous reactions will not occur under normal conditions.

Advice For Firefighters

Precautionary measures fire: Not available.

Firefighting instructions: Exercise caution when fighting any chemical fire. Fight fire from safe distance and protected location. Use water spray or fog for cooling exposed containers.

Protection during firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Ammonia. Amines. Olefins. Nitrogen oxides. Organic compounds. Carbon oxides (CO, CO₂).

Reference To Other Sections

Refer to section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment And Emergency Procedures

General measures: Use special care to avoid static electric charges. Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Avoid all eyes and skin contact and do not breathe vapour and mist.

For Non-Emergency Personnel

Protective equipment: Use appropriate personal protection equipment (PPE).

Emergency procedures: Evacuate unnecessary personnel.

For Emergency Personnel

Emergency procedures: Ventilate area.

Environmental Precautions

Prevent entry to sewers and public waters.

Methods And Material For Containment And Cleaning Up

For containment: Stop the flow of material, if this is without risk. Use only non-sparking tools. Remove ignition sources.

Methods for cleaning up: Clear up spills immediately and dispose of waste safely. Absorb and/or contain spill with inert material, then place in suitable container. Do not take up in combustible material such as: saw dust or cellulosic material.

Reference To Other Sections

See heading 8, exposure controls and personal protection.

SECTION 7: HANDLING AND STORAGE

Precautions For Safe Handling

Additional hazards when processed: Handle empty containers with care because residual vapours are flammable. Never return unused material to original container

Hygiene measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Wash hands and forearms thoroughly after handling.

Conditions For Safe Storage, Including Any Incompatibilities

Technical measures: Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion proof electrical, ventilating, lighting equipment.

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Storage conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Store in a well-ventilated place. Keep container tightly closed. Keep in fireproof place. Keep container tightly closed. Store away from incompatible materials. Protect from heat and direct sunlight. Store away from oxidizers, combustible materials, and all ignition sources.

Incompatible materials: Strong acids. Strong bases. Strong oxidizers. Keep out of direct sunlight. Ignition sources. Open flames. Combustible material.

Storage area: Store locked up. Store in a well-ventilated place. Keep cool. Avoid contact with water. Humidity.

Specific End Use(s)

Crosslinker. For professional use only.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Methyl alcohol (67-56-1)		
Mexico	OEL TWA (mg/m ³)	260 mg/m ³
Mexico	OEL TWA (ppm)	200 ppm
Mexico	OEL STEL (mg/m ³)	310 mg/m ³
Mexico	OEL STEL (ppm)	250 ppm
USA ACGIH	ACGIH TWA (ppm)	200 ppm
USA ACGIH	ACGIH STEL (ppm)	250 ppm
USA OSHA	OSHA PEL (TWA) (mg/m ³)	260 mg/m ³
USA OSHA	OSHA PEL (TWA) (ppm)	200 ppm
USA NIOSH	NIOSH REL (ceiling) (mg/m ³)	325 mg/m ³
USA NIOSH	NIOSH REL (STEL) (ppm)	250 ppm
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	260 mg/m ³
USA NIOSH	NIOSH REL (TWA) (ppm)	200 ppm
USA IDLH	US IDLH (ppm)	6000 ppm
Alberta	OEL STEL (mg/m ³)	328 mg/m ³
Alberta	OEL STEL (ppm)	250 ppm
Alberta	OEL TWA (mg/m ³)	262 mg/m ³
Alberta	OEL TWA (ppm)	200 ppm
British Columbia	OEL STEL (ppm)	250 ppm
British Columbia	OEL TWA (ppm)	200 ppm
Manitoba	OEL STEL (ppm)	250 ppm
Manitoba	OEL TWA (ppm)	200 ppm
New Brunswick	OEL STEL (mg/m ³)	328 mg/m ³
New Brunswick	OEL STEL (ppm)	250 ppm
New Brunswick	OEL TWA (mg/m ³)	262 mg/m ³
New Brunswick	OEL TWA (ppm)	200 ppm
Newfoundland & Labrador	OEL STEL (ppm)	250 ppm
Newfoundland & Labrador	OEL TWA (ppm)	200 ppm
Nova Scotia	OEL STEL (ppm)	250 ppm
Nova Scotia	OEL TWA (ppm)	200 ppm
Nunavut	OEL STEL (mg/m ³)	328 mg/m ³

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Nunavut	OEL STEL (ppm)	250 ppm
Nunavut	OEL TWA (mg/m ³)	262 mg/m ³
Nunavut	OEL TWA (ppm)	200 ppm
Northwest Territories	OEL STEL (mg/m ³)	328 mg/m ³
Northwest Territories	OEL STEL (ppm)	250 ppm
Northwest Territories	OEL TWA (mg/m ³)	262 mg/m ³
Northwest Territories	OEL TWA (ppm)	200 ppm
Ontario	OEL STEL (ppm)	250 ppm
Ontario	OEL TWA (ppm)	200 ppm
Prince Edward Island	OEL STEL (ppm)	250 ppm
Prince Edward Island	OEL TWA (ppm)	200 ppm
Québec	VECD (mg/m ³)	328 mg/m ³
Québec	VECD (ppm)	250 ppm
Québec	VEMP (mg/m ³)	262 mg/m ³
Québec	VEMP (ppm)	200 ppm
Saskatchewan	OEL STEL (ppm)	250 ppm
Saskatchewan	OEL TWA (ppm)	200 ppm
Yukon	OEL STEL (mg/m ³)	310 mg/m ³
Yukon	OEL STEL (ppm)	250 ppm
Yukon	OEL TWA (mg/m ³)	260 mg/m ³
Yukon	OEL TWA (ppm)	200 ppm

Glycerin (56-81-5)

Mexico	OEL TWA (mg/m ³)	10 mg/m ³
USA ACGIH	ACGIH TWA (mg/m ³)	10 mg/m ³
USA OSHA	OSHA PEL (TWA) (mg/m ³)	5 mg/m ³
Alberta	OEL TWA (mg/m ³)	10 mg/m ³ (mist)
British Columbia	OEL TWA (mg/m ³)	3 mg/m ³ (mist)
Manitoba	OEL TWA (mg/m ³)	10 mg/m ³
New Brunswick	OEL TWA (mg/m ³)	10 mg/m ³ (mist)
Newfoundland & Labrador	OEL TWA (mg/m ³)	10 mg/m ³
Nova Scotia	OEL TWA (mg/m ³)	10 mg/m ³
Nunavut	OEL STEL (mg/m ³)	20 mg/m ³
Nunavut	OEL TWA (mg/m ³)	10 mg/m ³
Northwest Territories	OEL STEL (mg/m ³)	20 mg/m ³
Northwest Territories	OEL TWA (mg/m ³)	10 mg/m ³
Ontario	OEL TWA (mg/m ³)	10 mg/m ³ (mist)
Prince Edward Island	OEL TWA (mg/m ³)	10 mg/m ³
Québec	VEMP (mg/m ³)	10 mg/m ³
Saskatchewan	OEL STEL (mg/m ³)	20 mg/m ³
Saskatchewan	OEL TWA (mg/m ³)	10 mg/m ³
Yukon	OEL TWA (mg/m ³)	10 mg/m ³

Isopropyl alcohol (67-63-0)

Mexico	OEL TWA (mg/m ³)	980 mg/m ³
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Mexico	OEL TWA (ppm)	400 ppm
Mexico	OEL STEL (mg/m ³)	1225 mg/m ³
Mexico	OEL STEL (ppm)	500 ppm
USA ACGIH	ACGIH TWA (ppm)	200 ppm
USA ACGIH	ACGIH STEL (ppm)	400 ppm
USA OSHA	OSHA PEL (TWA) (mg/m ³)	980 mg/m ³
USA OSHA	OSHA PEL (TWA) (ppm)	400 ppm
USA NIOSH	NIOSH REL (ceiling) (mg/m ³)	1225 mg/m ³
USA NIOSH	NIOSH REL (STEL) (ppm)	500 ppm
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	980 mg/m ³
USA NIOSH	NIOSH REL (TWA) (ppm)	400 ppm
USA IDLH	US IDLH (ppm)	2000 ppm (10% LEL)
Alberta	OEL STEL (mg/m ³)	984 mg/m ³
Alberta	OEL STEL (ppm)	400 ppm
Alberta	OEL TWA (mg/m ³)	492 mg/m ³
Alberta	OEL TWA (ppm)	200 ppm
British Columbia	OEL STEL (ppm)	400 ppm
British Columbia	OEL TWA (ppm)	200 ppm
Manitoba	OEL STEL (ppm)	400 ppm
Manitoba	OEL TWA (ppm)	200 ppm
New Brunswick	OEL STEL (mg/m ³)	1230 mg/m ³
New Brunswick	OEL STEL (ppm)	500 ppm
New Brunswick	OEL TWA (mg/m ³)	983 mg/m ³
New Brunswick	OEL TWA (ppm)	400 ppm
Newfoundland & Labrador	OEL STEL (ppm)	400 ppm
Newfoundland & Labrador	OEL TWA (ppm)	200 ppm
Nova Scotia	OEL STEL (ppm)	400 ppm
Nova Scotia	OEL TWA (ppm)	200 ppm
Nunavut	OEL STEL (mg/m ³)	1228 mg/m ³
Nunavut	OEL STEL (ppm)	500 ppm
Nunavut	OEL TWA (mg/m ³)	983 mg/m ³
Nunavut	OEL TWA (ppm)	400 ppm
Northwest Territories	OEL STEL (mg/m ³)	1228 mg/m ³
Northwest Territories	OEL STEL (ppm)	500 ppm
Northwest Territories	OEL TWA (mg/m ³)	983 mg/m ³
Northwest Territories	OEL TWA (ppm)	400 ppm
Ontario	OEL STEL (ppm)	400 ppm
Ontario	OEL TWA (ppm)	200 ppm
Prince Edward	OEL STEL (ppm)	400 ppm

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Island		
Prince Edward Island	OEL TWA (ppm)	200 ppm
Québec	VECD (mg/m ³)	1230 mg/m ³
Québec	VECD (ppm)	500 ppm
Québec	VEMP (mg/m ³)	985 mg/m ³
Québec	VEMP (ppm)	400 ppm
Saskatchewan	OEL STEL (ppm)	400 ppm
Saskatchewan	OEL TWA (ppm)	200 ppm
Yukon	OEL STEL (mg/m ³)	1225 mg/m ³
Yukon	OEL STEL (ppm)	500 ppm
Yukon	OEL TWA (mg/m ³)	980 mg/m ³
Yukon	OEL TWA (ppm)	400 ppm

Triethanolamine (102-71-6)		
USA ACGIH	ACGIH TWA (mg/m ³)	5 mg/m ³
Alberta	OEL TWA (mg/m ³)	5 mg/m ³
British Columbia	OEL TWA (mg/m ³)	5 mg/m ³
Manitoba	OEL TWA (mg/m ³)	5 mg/m ³
New Brunswick	OEL TWA (mg/m ³)	5 mg/m ³
Newfoundland & Labrador	OEL TWA (mg/m ³)	5 mg/m ³
Nova Scotia	OEL TWA (mg/m ³)	5 mg/m ³
Ontario	OEL TWA (mg/m ³)	3.1 mg/m ³
Ontario	OEL TWA (ppm)	0.5 ppm
Prince Edward Island	OEL TWA (mg/m ³)	5 mg/m ³
Québec	VEMP (mg/m ³)	5 mg/m ³
Saskatchewan	OEL STEL (mg/m ³)	10 mg/m ³
Saskatchewan	OEL TWA (mg/m ³)	5 mg/m ³

Exposure Controls

Appropriate engineering controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure all national/local regulations are observed. Gas detectors should be used when flammable gases/vapours may be released. Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof equipment. Ensure adequate ventilation, especially in confined areas.

Personal protective equipment: Gloves. Protective clothing. Protective goggles. Insufficient ventilation: wear respiratory protection



Materials for protective clothing: Chemically resistant materials and fabrics. Wear fire/flammable resistant/retardant clothing.

Hand protection: Wear chemically resistant protective gloves.

Eye protection: Chemical goggles or face shield.

Skin and body protection: Wear suitable protective clothing.

Respiratory protection: Use NIOSH-approved air-purifying or supplied-air respirator where airborne concentrations of vapor or mist are expected to exceed exposure limits.

Thermal hazard protection: Wear suitable protective clothing.

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Other information: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information On Basic Physical And Chemical Properties

Physical state	: Liquid
Appearance	: Transparent,orange,red
Odour	: Alcohol
Odour threshold	: Not available
pH	: 7 - 10
Relative evaporation rate (butylacetate=1)	: Not available
Melting point	: Not available
Freezing point	: Not available
Boiling point	: Not available
Flash point	: 11 °C (51.8°F)
Auto-ignition temperature	: Not available
Decomposition Temperature	: Not available
Flammability (solid, gas)	: Not available
Lower flammable limit	: Not available
Upper flammable limit	: Not available
Vapour pressure	: Not available
Relative vapour density at 20 °C	: Not available
Relative density	: 0.93 - 0.96
Specific gravity density	: Not available
Solubility	: Not available
Log Pow	: Not available
Log Kow	: Not available
Viscosity, kinematic	: Not available
Viscosity, dynamic	: Not available
Explosion data - sensitivity to mechanical impact	: Not available
Explosion data - sensitivity to static discharge	: Not available

SECTION 10: STABILITY AND REACTIVITY

Reactivity Hazardous reactions will not occur under normal conditions.

Chemical Stability Highly flammable liquid and vapour. May form flammable/explosive vapour-air mixture.

Possibility Of Hazardous Reactions Hazardous polymerization will not occur.

Conditions To Avoid Direct sunlight. Extremely high or low temperatures. Open flame. Ignition sources. Incompatible materials. Sparks.

Incompatible Materials Strong acids. Strong bases. Strong oxidizers.

Hazardous Decomposition Products Carbon oxides (CO, CO₂).May release flammable gases. Olefins. Ammonia.amines. Nitrogen oxides.Organic materials.

SECTION 11: TOXICOLOGICAL INFORMATION

Information On Toxicological Effects - Product

Acute toxicity : Toxic if swallowed. Toxic in contact with skin. Toxic if inhaled.

LD50 and LC50 Data Not available

Skin corrosion/irritation: Not classified **pH: 7 - 10**

Serious eye damage/irritation: Not classified **pH: 7 - 10**

Respiratory or skin sensitisation: Not classified

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Germ cell mutagenicity: Not classified

Teratogenicity: Not available

Carcinogenicity: Not classified

Specific target organ toxicity (repeated exposure): Not classified

Reproductive toxicity: Not classified

Specific target organ toxicity (single exposure): Causes damage to organs.

Aspiration hazard: Not classified

Potential Adverse human health effects and symptoms: Toxic in contact with skin. Toxic if inhaled. Toxic if swallowed.

Symptoms/injuries after inhalation: Toxic if inhaled. Respiratory tract irritation.

Symptoms/injuries after skin contact: Toxic in contact with skin. Causes skin irritation.

Symptoms/injuries after eye contact: May cause eye irritation.

Symptoms/injuries after ingestion: Toxic if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

Information On Toxicological Effects - Ingredient(s)

LD50 and LC50 Data

Methyl alcohol (67-56-1)	
ATE (oral)	100 mg/kg
ATE (dermal)	300 mg/kg
ATE (vapours)	3 mg/l/4h
Glycerin (56-81-5)	
LD50 oral rat	12600 mg/kg
LD50 dermal rat	> 21900 mg/kg
Isopropyl alcohol (67-63-0)	
LD50 oral rat	4396 mg/kg
LD50 dermal rat	12800 mg/kg
LD50 dermal rabbit	12870 mg/kg
LC50 inhalation rat (mg/l)	72.6 mg/l (Exposure time: 4 h)
Triethanolamine (102-71-6)	
LD50 oral rat	4190 mg/kg
Isopropyl alcohol (67-63-0)	
IARC group	3
Triethanolamine (102-71-6)	
IARC group	3
National Toxicity Program (NTP) Status	1

SECTION 12: ECOLOGICAL INFORMATION

Toxicity

Methyl alcohol (67-56-1)	
LC50 fishes 1	28200 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
LC50 fish 2	> 100 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
Glycerin (56-81-5)	
LC50 fishes 1	51 (51 - 57) ml/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])
EC50 Daphnia 1	> 500 mg/l (Exposure time: 24 h - Species: Daphnia magna)
Isopropyl alcohol (67-63-0)	
LC50 fishes 1	9640 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-])

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	through])
EC50 Daphnia 1	13299 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 other aquatic organisms 1	1000 mg/l (Exposure time: 96 h - Species: Desmodesmus subspicatus)
LC50 fish 2	11130 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 other aquatic organisms 2	1000 mg/l (Exposure time: 72 h - Species: Desmodesmus subspicatus)
Triethanolamine (102-71-6)	
LC50 fishes 1	10600 (10600 - 13000) mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	1386 mg/l (Exposure time: 24 h - Species: Daphnia magna)
EC50 other aquatic organisms 1	216 mg/l (Exposure time: 72 h - Species: Desmodesmus subspicatus)
LC50 fish 2	1000 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 other aquatic organisms 2	169 mg/l (Exposure time: 96 h - Species: Desmodesmus subspicatus)

Persistence And Degradability

Ecopol-CL12	
Persistence and degradability	Not established.

Bioaccumulative Potential

Ecopol-CL12	
Bioaccumulative potential	Not established.

Methyl alcohol (67-56-1)

BCF fish 1	< 10
Log Pow	-0.77

Glycerin (56-81-5)

BCF fish 1	(no bioaccumulation)
Log Pow	-1.76

Isopropyl alcohol (67-63-0)

Log Pow	0.05 (at 25 °C)
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Triethanolamine (102-71-6)

BCF fish 1	3.9
Log Pow	-2.53

Mobility In Soil Not available

Other Adverse Effects

Other information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste disposal recommendations: Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

Additional information: Handle empty containers with care because residual vapours are flammable.

Ecology - waste materials: Hazardous waste due to toxicity.

SECTION 14: TRANSPORT INFORMATION

In accordance with ICAO/IATA/DOT/TDG

UN Number

UN-No.(DOT): 1230

DOT NA no.: UN1230

UN Proper Shipping Name

DOT Proper Shipping Name : Methanol (Contains Methanol, 42%)

Department of Transportation (DOT) Hazard Classes : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120

Hazard labels (DOT) : 3 - Flammable liquid
6.1 - Toxic substance

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- DOT Symbols** : + - Fixes (cannot be altered) proper shipping name, hazard class, and packing group, I - Proper shipping name appropriate for international and domestic transportation
- Packing group (DOT)** : II - Medium Danger
- DOT Special Provisions (49 CFR 172.102)** : IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized.
T7 - 4 178.274(d)(2) Normal..... 178.275(d)(3)
TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following formula: Where: t_r is the maximum mean bulk temperature during transport, t_f is the temperature in degrees celsius of the liquid during filling, and α is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (t_f) and the maximum mean bulk temperature during transportation (t_r) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: Where: d_{15} and d_{50} are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively.
- DOT Packaging Exceptions (49 CFR 173.xxx)** : 150
- DOT Packaging Non Bulk (49 CFR 173.xxx)** : 202
- DOT Packaging Bulk (49 CFR 173.xxx)** : 242
- Additional information**
- Emergency Response Guide (ERG) Number** : 131
- Overland transport** Not regulated for transport
- Transport by sea**
- DOT Vessel Stowage Location** : B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.
- DOT Vessel Stowage Other** : 40 - Stow "clear of living quarters"
- Air transport**
- DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)** : 1 L
- DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)** : 60 L

SECTION 15: REGULATORY INFORMATION

US Federal regulations

Ecopol-CL12	
SARA Section 311/312 Hazard Classes	Delayed (chronic) health hazard Immediate (acute) health hazard Fire hazard
Water (7732-18-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

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Methyl alcohol (67-56-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on SARA Section 313 (Specific toxic chemical listings)	
SARA Section 311/312 Hazard Classes	Delayed (chronic) health hazard Immediate (acute) health hazard Fire hazard
SARA Section 313 - Emission Reporting	1.0 %

Glycerin (56-81-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
EPA TSCA Regulatory Flag	Y2 - Y2 - indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

Isopropyl alcohol (67-63-0)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on SARA Section 313 (Specific toxic chemical listings)	
EPA TSCA Regulatory Flag	T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA.
SARA Section 313 - Emission Reporting	1.0 % (only if manufactured by the strong acid process, no supplier notification)

Triethanolamine (102-71-6)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
1-Propanol, zirconium(4+) salt (23519-77-9)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

US State regulations

Methyl alcohol (67-56-1)	
U.S. - California - Proposition 65 - Developmental Toxicity	WARNING: This product contains chemicals known to the State of California to cause birth defects.

Methyl alcohol (67-56-1)	
U.S. - California - SCAQMD - Toxic Air Contaminants - Non-Cancer Acute U.S. - California - SCAQMD - Toxic Air Contaminants - Non-Cancer Chronic U.S. - California - Toxic Air Contaminant List (AB 1807, AB 2728) U.S. - Colorado - Hazardous Wastes - Discarded Chemical Products, Off-Specification Species, Container and Spill Residues U.S. - Connecticut - Hazardous Air Pollutants - HLVs (30 min) U.S. - Connecticut - Hazardous Air Pollutants - HLVs (8 hr) U.S. - Connecticut - Volatile Substances U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities U.S. - Hawaii - Occupational Exposure Limits - Skin Designations U.S. - Hawaii - Occupational Exposure Limits - STELs U.S. - Hawaii - Occupational Exposure Limits - TWAs U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Emission Levels (ELs) U.S. - Idaho - Occupational Exposure Limits - TWAs U.S. - Illinois - Toxic Air Contaminants U.S. - Louisiana - Reportable Quantity List for Pollutants U.S. - Maine - Air Pollutants - Hazardous Air Pollutants U.S. - Maine - Chemicals of High Concern U.S. - Massachusetts - Allowable Ambient Limits (AALs) U.S. - Massachusetts - Allowable Threshold Concentrations (ATCs) U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 1 U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 2	

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U.S. - Massachusetts - Oil & Hazardous Material List - Reportable Quantity
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 1
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 2
U.S. - Massachusetts - Right To Know List
U.S. - Massachusetts - Threshold Effects Exposure Limits (TELEs)
U.S. - Massachusetts - Toxics Use Reduction Act
U.S. - Michigan - Occupational Exposure Limits - Skin Designations
U.S. - Michigan - Occupational Exposure Limits - STELEs
U.S. - Michigan - Occupational Exposure Limits - TWAs
U.S. - Michigan - Polluting Materials List
U.S. - Minnesota - Groundwater Health Risk Limits
U.S. - Minnesota - Hazardous Substance List
U.S. - Minnesota - Permissible Exposure Limits - Skin Designations
U.S. - Minnesota - Permissible Exposure Limits - STELEs
U.S. - Minnesota - Permissible Exposure Limits - TWAs
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - 24-Hour
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - Annual
U.S. - New Jersey - Discharge Prevention - List of Hazardous Substances
U.S. - New Jersey - Environmental Hazardous Substances List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - New Jersey - Special Health Hazards Substances List
U.S. - New Jersey - Water Quality - Ground Water Quality Criteria
U.S. - New Jersey - Water Quality - Practical Quantitation Levels (PQLs)
U.S. - New York - Occupational Exposure Limits - TWAs
U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances
U.S. - North Dakota - Air Pollutants - Guideline Concentrations - 1-Hour
U.S. - North Dakota - Air Pollutants - Guideline Concentrations - 8-Hour
U.S. - North Dakota - Hazardous Wastes - Discarded Chemical Products, Off-Specification Species, Container and Spill Residues
U.S. - Oregon - Permissible Exposure Limits - TWAs
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
U.S. - Pennsylvania - RTK (Right to Know) List
U.S. - Rhode Island - Air Toxics - Acceptable Ambient Levels - 1-Hour
U.S. - Rhode Island - Air Toxics - Acceptable Ambient Levels - Annual
U.S. - South Carolina - Toxic Air Pollutants - Maximum Allowable Concentrations
U.S. - South Carolina - Toxic Air Pollutants - Pollutant Categories
U.S. - Tennessee - Occupational Exposure Limits - Skin Designations
U.S. - Tennessee - Occupational Exposure Limits - STELEs
U.S. - Tennessee - Occupational Exposure Limits - TWAs
U.S. - Texas - Effects Screening Levels - Long Term
U.S. - Texas - Effects Screening Levels - Short Term
U.S. - Vermont - Permissible Exposure Limits - Skin Designations
U.S. - Vermont - Permissible Exposure Limits - STELEs
U.S. - Vermont - Permissible Exposure Limits - TWAs
U.S. - Washington - Dangerous Waste - Discarded Chemical Products List
U.S. - Washington - Permissible Exposure Limits - Skin Designations
U.S. - Washington - Permissible Exposure Limits - STELEs
U.S. - Washington - Permissible Exposure Limits - TWAs

Glycerin (56-81-5)

U.S. - Connecticut - Hazardous Air Pollutants - HLEVs (30 min)
U.S. - Connecticut - Hazardous Air Pollutants - HLEVs (8 hr)
U.S. - Hawaii - Occupational Exposure Limits - TWAs
U.S. - Idaho - Occupational Exposure Limits - TWAs

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U.S. - Massachusetts - Right To Know List
U.S. - Michigan - Occupational Exposure Limits - TWAs
U.S. - Minnesota - Hazardous Substance List
U.S. - Minnesota - Permissible Exposure Limits - TWAs
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - 24-Hour
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - Annual
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - North Dakota - Air Pollutants - Guideline Concentrations - 8-Hour
U.S. - Oregon - Permissible Exposure Limits - TWAs
U.S. - Pennsylvania - RTK (Right to Know) List
U.S. - Tennessee - Occupational Exposure Limits - TWAs
U.S. - Texas - Effects Screening Levels - Long Term
U.S. - Texas - Effects Screening Levels - Short Term
U.S. - Vermont - Permissible Exposure Limits - TWAs
U.S. - Washington - Permissible Exposure Limits - STELs
U.S. - Washington - Permissible Exposure Limits - TWAs

Isopropyl alcohol (67-63-0)

U.S. - California - SCAQMD - Toxic Air Contaminants - Non-Cancer Acute
U.S. - California - SCAQMD - Toxic Air Contaminants - Non-Cancer Chronic
U.S. - California - Toxic Air Contaminant List (AB 1807, AB 2728)
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (30 min)
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (8 hr)
U.S. - Connecticut - Volatile Substances
U.S. - Hawaii - Occupational Exposure Limits - STELs
U.S. - Hawaii - Occupational Exposure Limits - TWAs
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Emission Levels (ELs)
U.S. - Idaho - Occupational Exposure Limits - TWAs
U.S. - Massachusetts - Right To Know List
U.S. - Massachusetts - Toxics Use Reduction Act
U.S. - Michigan - Occupational Exposure Limits - STELs
U.S. - Michigan - Occupational Exposure Limits - TWAs
U.S. - Minnesota - Hazardous Substance List
U.S. - Minnesota - Permissible Exposure Limits - STELs
U.S. - Minnesota - Permissible Exposure Limits - TWAs
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - 24-Hour
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - Annual
U.S. - New Jersey - Discharge Prevention - List of Hazardous Substances
U.S. - New Jersey - Environmental Hazardous Substances List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - New Jersey - Special Health Hazards Substances List
U.S. - New York - Occupational Exposure Limits - TWAs
U.S. - North Dakota - Air Pollutants - Guideline Concentrations - 1-Hour
U.S. - North Dakota - Air Pollutants - Guideline Concentrations - 8-Hour
U.S. - Oregon - Permissible Exposure Limits - TWAs
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
U.S. - Pennsylvania - RTK (Right to Know) List
U.S. - Rhode Island - Air Toxics - Acceptable Ambient Levels - 1-Hour
U.S. - Tennessee - Occupational Exposure Limits - STELs
U.S. - Tennessee - Occupational Exposure Limits - TWAs
U.S. - Texas - City of Austin - Aerosol Paint and Glue Restrictions
U.S. - Texas - Effects Screening Levels - Long Term

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U.S. - Texas - Effects Screening Levels - Short Term
U.S. - Vermont - Permissible Exposure Limits - STELs
U.S. - Vermont - Permissible Exposure Limits - TWAs
U.S. - Washington - Permissible Exposure Limits - STELs
U.S. - Washington - Permissible Exposure Limits - TWAs

Triethanolamine (102-71-6)

U.S. - Massachusetts - Right To Know List
U.S. - Minnesota - Hazardous Substance List
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - 24-Hour
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - Annual
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - North Dakota - Air Pollutants - Guideline Concentrations - 8-Hour
U.S. - Pennsylvania - RTK (Right to Know) List
U.S. - Texas - Effects Screening Levels - Long Term
U.S. - Texas - Effects Screening Levels - Short Term
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 25 Feet to Less Than 40 Feet
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 40 Feet to Less Than 75 Feet
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 75 Feet or Greater
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights Less Than 25 Feet

1-Propanol, zirconium(4+) salt (23519-77-9)

U.S. - Texas - Effects Screening Levels - Long Term
U.S. - Texas - Effects Screening Levels - Short Term

Canadian regulations

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WHMIS Classification	Class B Division 2 - Flammable Liquid Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects Class D Division 2 Subdivision A - Very toxic material causing other toxic effects
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Water (7732-18-5)

Listed on the Canadian DSL (Domestic Substances List) inventory.

WHMIS Classification	Uncontrolled product according to WHMIS classification criteria
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Methyl alcohol (67-56-1)

Listed on the Canadian DSL (Domestic Substances List) inventory.

Listed on the Canadian Ingredient Disclosure List

WHMIS Classification	Class B Division 2 - Flammable Liquid Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects Class D Division 2 Subdivision A - Very toxic material causing other toxic effects Class D Division 2 Subdivision B - Toxic material causing other toxic effects
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Glycerin (56-81-5)

Listed on the Canadian DSL (Domestic Substances List) inventory.

WHMIS Classification	Uncontrolled product according to WHMIS classification criteria
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Isopropyl alcohol (67-63-0)

Listed on the Canadian DSL (Domestic Substances List) inventory.

Listed on the Canadian Ingredient Disclosure List

WHMIS Classification	Class B Division 2 - Flammable Liquid Class D Division 2 Subdivision B - Toxic material causing other toxic effects
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Triethanolamine (102-71-6)

Listed on the Canadian DSL (Domestic Substances List) inventory.

Listed on the Canadian Ingredient Disclosure List

WHMIS Classification Uncontrolled product according to WHMIS classification criteria

1-Propanol, zirconium(4+) salt (23519-77-9)

Listed on Non-Domestic Substances List (NDSL)

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by CPR.

SECTION 16: OTHER INFORMATION

Indication of changes

: Revision date: 09/11/2013

Other information

: This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

Acute Tox. 3 (Dermal)	Acute toxicity (dermal) Category 3
Acute Tox. 3 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral) Category 3
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Flam. Liq. 2	Flammable liquids Category 2
STOT SE 1	Specific target organ toxicity (single exposure) Category 1
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H225	Highly flammable liquid and vapour
H301	Toxic if swallowed
H311	Toxic in contact with skin
H319	Causes serious eye irritation
H331	Toxic if inhaled
H336	May cause drowsiness or dizziness
H370	Causes damage to organs

Party Responsible For The Preparation Of This Document:

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This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

North America GHS US 2012 & WHMIS