Material Safety Data Sheet

WXL 105L

1. Product and Company Identification

Material name	**WXL 105L**
Patent Number	Not available
Revision date	December-15-2009
Version No.	1
CAS #	Mixture
Product use	Crosslinker
Manufacturer information	WEATHERFORD INTERNATIONAL ENG.CHEM. 4420 SOUTH FLORES RD ELMENDORF, TX 78112 US Product Safety 210-626-0850 Chemtrec 800-424-9300
Emergency	Chemtrec 800-424-9300
Supplier information	WEATHERFORD® Engineered Chemistry® 100 Industrial Drive, Suite A Leetsdale, PA 15056 US

2. Hazards Identification

Emergency overview	WARNING Harmful if swallowed. Harmful in contact with eyes. Irritating to eyes and skin. Avoid contact with skin, eyes and clothing. Prolonged exposure may cause chronic effects. Components of the product may be absorbed into the body by inhalation, ingestion and through the skin.
OSHA regulatory status	This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).
Potential health effects	
Routes of exposure	Inhalation. Skin contact. Eye contact. Ingestion.
Eyes	This product causes eye burns. Risk of serious damage to eyes. Do not get this material in contact with eyes.
Skin	Do not get this material in contact with skin. Causes skin burns.
Inhalation	Do not breathe vapor. Causes burns. Prolonged inhalation may be harmful.
Ingestion	Do not ingest. Ingestion may produce burns to the lips, oral cavity, upper airway, esophagus and possibly the digestive tract. May cause delayed lung damage. Components of the product may be absorbed into the body by ingestion.
Target organs	Central nervous system. Eyes. Lungs. Respiratory system. Skin.

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Chronic effects	Shortness of breath. May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. May cause delayed lung damage.
Signs and symptoms	Discomfort in the chest. Shortness of breath. Narcosis. Decrease in motor functions. Behavioral changes. Cough.
Potential environmental effects	Components of this product are hazardous to aquatic life. May cause long-term adverse effects in the environment.

3. Composition / Information on Ingredients

Components	CAS #	Percent
Boric Acid	10043-35-3	10 - 30
Ethylene Glycol	107-21-1	30 - 60
Monoethanolamine	141-43-5	3 - 7

4. First Aid Measures

First aid procedures

Eye contact	Immediately flush eye(s) with plenty of water. Get medical attention if irritation develops or persists.
Skin contact	Wash off with soap and water. Get medical attention if symptoms occur.
Inhalation	If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Get medical attention immediately.
Ingestion	If swallowed, seek medical advice immediately and show this container or label. Do not induce vomiting without medical advice.
Notes to physician	In case of shortness of breath, give oxygen. Keep victim warm. Symptoms may be delayed.
General advice	In case of shortness of breath, give oxygen. Keep victim warm. Call a physician if symptoms develop or persist. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire Fighting Measures

Extinguishing media

Suitable extinguishing media	Water. Alcohol foam. Polymer foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use a solid water stream as it may scatter and spread fire.

Protection of firefighters

Protective equipment and precautions for firefighters	Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask. If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also consider initial evacuation for 800 meters (1/2 mile) in all directions. ALWAYS stay away from tanks engulfed in flame. Withdraw immediately in case of rising sound from venting safety devices or any discoloration of tanks due to fire. Move containers from fire area if you can do it without risk. Do not scatter spilled material with high pressure water streams. Use water spray to cool unopened containers. Cool containers with flooding quantities of water until well after fire is out.

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6. Accidental Release Measures

Personal precautions

Fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering. Keep unnecessary personnel away. Stay upwind. Keep out of low areas.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not contaminate water.

Methods for containment

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use water spray to reduce vapors or divert vapor cloud drift. Prevent entry into waterways, sewers, basements or confined areas.

Methods for cleaning up

Should not be released into the environment.

Large Spills: Dike far ahead of liquid spill for later disposal. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. After removal flush contaminated area thoroughly with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean contaminated surface thoroughly.

Never return spills in original containers for re-use.

7. Handling and Storage

Handling

Use only with adequate ventilation. Avoid release to the environment. Wash thoroughly after handling. Avoid prolonged exposure.

Storage

Store in a closed container away from incompatible materials. Store in accordance with local/regional/national/international regulation.

8. Exposure Controls / Personal Protection

Exposure limits

ACGIH

Components	CAS #	TWA	STEL	Ceiling
Ethylene Glycol	107-21-1	Not established	Not established	100 mg/m3
Boric Acid	10043-35-3	2 mg/m3	6 mg/m3	Not established
Monoethanolamine	141-43-5	3 ppm	6 ppm	Not established

OSHA

Components	CAS #	TWA	STEL	Ceiling
Monoethanolamine	141-43-5	3 ppm	Not established	Not established

Engineering controls

Ensure adequate ventilation, especially in confined areas. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower nearby.

Personal protective equipment

Eye / face protection

Do not get this material in contact with eyes. Wear safety glasses with side shields (or goggles) and a face shield.

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Skin protection	Do not get this material in contact with skin. Do not get this material on clothing. Use chemical splash goggles and face shield (ANSI Z87.1 or approved equivalent). Protective gloves.Impervious gloves.
Respiratory protection	Wear positive pressure self-contained breathing apparatus (SCBA). When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
General hygeine considerations	Do not get this material in contact with eyes. Do not get this material in contact with skin. Do not get this material on clothing. When using do not eat or drink. Keep away from food and drink. Handle in accordance with good industrial hygiene and safety practice.

9. Physical & Chemical Properties

Appearance	Liquid.
Color	Colorless - light yellow
Odor	Not available.
Odor threshold	Not available
Physical state	Liquid.
Form	Liquid.
pH	7 - 8
Melting point	-9.4 °F (-23 °C)
Freezing point	Not available
Boiling point	300.2 °F (149 °C) estimated
Flash point	200 °F (93.3 °C)
Evaporation rate	Not available
Flammability	Not available.
Flammability limits in air, upper, % by volume	Not available
Flammability limits in air, lower, % by volume	Not available
Vapor pressure	Not available
Vapor density	Not available
Specific gravity	1.05 - 1.1
Relative density	1.0749 g/cm3 estimated
Solubility (water)	Soluble
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
VOC	30 % estimated

10. Chemical Stability & Reactivity Information

Chemical stability	Stable at normal conditions.
Conditions to avoid	Heat, flames and sparks.
Incompatible materials	Amines. Isocyanates. Strong oxidizing agents. Strong acids. Caustics.

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Possibility of hazardous reactions Hazardous polymerization does not occur.

11. Toxicological Information

Acute effects

Acute LD50: 8004 mg/kg estimated, Rat, Oral
Acute LD50: 22727 mg/kg estimated, Rat, Dermal
Causes burns.

Component analysis - LD50

Toxicology Data - Selected LD50s and LC50s

Boric Acid	10043-35-3	Oral LD50 Rat: 2660 mg/kg; Dermal LD50 Rabbit: >2000 mg/kg
Ethylene Glycol	107-21-1	Oral LD50 Rat: 4000 mg/kg; Dermal LD50 Rabbit:9530 µL/kg
Monoethanolamine	141-43-5	Oral LD50 Rat: 1720 mg/kg; Dermal LD50 Rabbit:1 mL/kg; Dermal LD50 Rabbit:1025 mg/kg

Chronic effects

Hazardous by OSHA criteria. Repeated absorption may cause disorder of central nervous system, liver, kidneys and blood. Prolonged or repeated exposure may cause lung injury. Prolonged exposure may cause chronic effects.

Carcinogenicity

Not expected to be hazardous by OSHA criteria.

ACGIH - Threshold Limit Values - Carcinogens

Boric Acid	10043-35-3	A4 - Not Classifiable as a Human Carcinogen
Ethylene Glycol	107-21-1	A4 - Not Classifiable as a Human Carcinogen

Neurological effects

Hazardous by OSHA criteria.

Further information

Symptoms may be delayed.

12. Ecological Information

Ecotoxicity

EC50 1783 mg/L estimated, Daphnia, 48.00 Hours,

Ecotoxicity - Freshwater Algae Data

Ethylene Glycol	107-21-1	96 Hr EC50 Selenastrum capricornutum: 6500-1300 mg/L
Monoethanolamine	141-43-5	72 Hr EC50 Scenedesmus subspicatus: 15 mg/L

Ecotoxicity - Freshwater Fish Species Data

Boric Acid	10043-35-3	72 Hr LC50 Carassius auratus: 1020 mg/L [flow-through]
Ethylene Glycol	107-21-1	96 Hr LC50 Oncorhynchus mykiss: 41000 mg/L; 96 Hr LC50 Lepomis macrochirus: 27500 mg/L; 96 Hr LC50 Oncorhynchus mykiss: 40761 mg/L [static]; 96 Hr LC50 Pimephales promelas: 49000 mg/L [static]; 96 Hr LC50 Poecilia reticulata: 16000 mg/L [static]
Monoethanolamine	141-43-5	96 Hr LC50 Pimephales promelas: 227 mg/L [flow-through]; 96 Hr LC50 Brachydanio rerio: 3684 mg/L [static]; 96 Hr LC50 Lepomis macrochirus: 329.16 mg/L [static]; 96 Hr LC50 Oncorhynchus mykiss: 150 mg/L [static]

Ecotoxicity - Microtox Data

Ethylene Glycol	107-21-1	30 min EC50 Photobacterium phosphoreum: 620.0 mg/L; 30 min EC50 Photobacterium phosphoreum: 620 mg/L; 16 Hr EC50 Pseudomonas putida: 10000 mg/L
Monoethanolamine	141-43-5	30 min EC50 Photobacterium phosphoreum: 13.7 mg/L; 17 Hr EC50 Pseudomonas putida: 110 mg/L; 2 Hr EC50 Nitrosomonas: 12200 mg/L

Ecotoxicity - Water Flea Data

Boric Acid	10043-35-3	48 Hr EC50 water flea: 115.0 mg/L [Static]; 48 Hr EC50 Daphnia magna: 658-875 mg/L
Ethylene Glycol	107-21-1	48 Hr EC50 water flea: 46300 mg/L
Monoethanolamine	141-43-5	48 Hr EC50 Daphnia magna: 65 mg/L

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Environmental effects Harmful to aquatic life.

Ecotoxicity - Freshwater Algae Data

Ethylene Glycol	107-21-1	96 Hr EC50 Selenastrum capricornutum: 6500-1300 mg/L
Monoethanolamine	141-43-5	72 Hr EC50 Scenedesmus subspicatus: 15 mg/L

Ecotoxicity - Freshwater Fish Species Data

Boric Acid	10043-35-3	72 Hr LC50 Carassius auratus: 1020 mg/L [flow-through]
Ethylene Glycol	107-21-1	96 Hr LC50 Oncorhynchus mykiss: 41000 mg/L; 96 Hr LC50 Lepomis macrochirus: 27500 mg/L; 96 Hr LC50 Oncorhynchus mykiss: 40761 mg/L [static]; 96 Hr LC50 Pimephales promelas: 49000 mg/L [static]; 96 Hr LC50 Poecilia reticulata: 16000 mg/L [static]
Monoethanolamine	141-43-5	96 Hr LC50 Pimephales promelas: 227 mg/L [flow-through]; 96 Hr LC50 Brachydanio rerio: 3684 mg/L [static]; 96 Hr LC50 Lepomis macrochirus: 329.16 mg/L [static]; 96 Hr LC50 Oncorhynchus mykiss: 150 mg/L [static]

Ecotoxicity - Microtox Data

Ethylene Glycol	107-21-1	30 min EC50 Photobacterium phosphoreum: 620.0 mg/L; 30 min EC50 Photobacterium phosphoreum: 620 mg/L; 16 Hr EC50 Pseudomonas putida: 10000 mg/L
Monoethanolamine	141-43-5	30 min EC50 Photobacterium phosphoreum: 13.7 mg/L; 17 Hr EC50 Pseudomonas putida: 110 mg/L; 2 Hr EC50 Nitrosomonas: 12200 mg/L

Ecotoxicity - Water Flea Data

Boric Acid	10043-35-3	48 Hr EC50 water flea: 115.0 mg/L [Static]; 48 Hr EC50 Daphnia magna: 658-875 mg/L
Ethylene Glycol	107-21-1	48 Hr EC50 water flea: 46300 mg/L
Monoethanolamine	141-43-5	48 Hr EC50 Daphnia magna: 65 mg/L

13. Disposal Considerations

Disposal instructions Do not allow this material to drain into sewers/water supplies. This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste. Dispose in accordance with all applicable regulations.

14. Transport Information

Department of Transportation (DOT) Requirements

Not regulated as hazardous goods.

Department of Transportation (DOT) Requirements

Bulk

Not regulated as hazardous goods.

Department of Transportation (DOT) Requirements

Not regulated as dangerous goods.

Canadian Transportation of Dangerous Goods (TDG) Requirements

Not regulated as hazardous goods.

IMDG

Not regulated as hazardous goods.

IMDG

Not regulated as dangerous goods.

IATA

Not regulated as hazardous goods.

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15. Regulatory Information

Labelling

Contains Boric Acid, Ethylene Glycol, Monoethanolamine

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

Ethylene Glycol	107-21-1	1.0 % de minimis concentration

U.S. - FDA - Direct Food Additives

Monoethanolamine	141-43-5	21 CFR 173.315

Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 hazardous chemical Yes

CERCLA (Superfund) reportable quantity

Ethylene Glycol: 5000.0000

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance No

Section 311 hazardous chemical Yes

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of New and Existing Chemicals (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

International regulations

Canada - WHMIS - Ingredient Disclosure List

Boric Acid	10043-35-3	1 %
Ethylene Glycol	107-21-1	1 %
Monoethanolamine	141-43-5	1 %

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State regulations This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

U.S. - Massachusetts - Right To Know List

Ethylene Glycol	107-21-1	Present
Monoethanolamine	141-43-5	Present

U.S. - Minnesota - Hazardous Substance List

Ethylene Glycol	107-21-1	Present (particulate and vapor)
Monoethanolamine	141-43-5	Present

U.S. - New Jersey - Right to Know Hazardous Substance List

Ethylene Glycol	107-21-1	sn 0878
Monoethanolamine	141-43-5	sn 0835

U.S. - Pennsylvania - RTK (Right to Know) List

Ethylene Glycol	107-21-1	Environmental hazard
Monoethanolamine	141-43-5	Present

U.S. - Rhode Island - Hazardous Substance List

Ethylene Glycol	107-21-1	Toxic; Flammable
Monoethanolamine	141-43-5	Toxic; Flammable

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

Boric Acid	10043-35-3	1 µg/m3 ESL (under review)
Ethylene Glycol	107-21-1	10 ppb ESL (46% Ethylene glycol); 26 µg/m3 ESL (46% Ethylene glycol)
Monoethanolamine	141-43-5	3 ppb ESL; 7.5 µg/m3 ESL; 8 µg/m3 ESL (regulated under Aminoethanol)

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

Boric Acid	10043-35-3	10 µg/m3 ESL (under review)
Ethylene Glycol	107-21-1	100 ppb ESL (46% ethylene glycol); 260 µg/m3 ESL (46% ethylene glycol)
Monoethanolamine	141-43-5	30 ppb ESL; 75 µg/m3 ESL; 80 µg/m3 ESL (regulated under Aminoethanol)

16. Other Information

HMIS® ratings
Health: 2*
Flammability: 1
Physical hazard: 0

NFPA ratings
Health: 2
Flammability: 1
Instability: 0

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