



Material Safety Data Sheet XL-8

HEALTH	1
FLAMMABILITY	1
REACTIVITY	0
PERSONAL PROTECTION	B

24 hr. Emergency Contact (CHEMTREC) US Tel: 1- 800 - 424-9300 - Int'l. Tel. 703 - 527 - 3887

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

SUPPLIER: CLEARWATER INTERNATIONAL L.L.C.
515 POST OAK BLVD., SUITE 600
HOUSTON, TX 77027

MANUFACTURER: CLEARWATER INTERNATIONAL L.L.C.
100 INDUSTRIAL DRIVE
LEETSDALE, PA 15056

PRODUCT NAME: XL-8
PRODUCT CODE: FRA5391C
PRODUCT USE/CLASS: Crosslinker

MSDS REVISION DATE: 11/25/03

PREPARER: MJW

PHONE: 724-318-1050

2. COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT	EXPOSURE LIMITS	CAS#	% BY WEIGHT
ETHYLENE GLYCOL	ACGIH TLV – 50 ppm STEL OSHA PEL – 50 ppm CEILING	107-21-1	10-30 %
PROPRIETARY COMPONENT	None Established	XXXX-XX-X	3-7 %

3. HAZARD IDENTIFICATION

EYE: Severely irritating. If not removed promptly, product will injure eye tissue, which may result in permanent damage.

SKIN: May cause skin irritation. Allergic reactions are possible.

INGESTION: This material may be harmful or fatal if swallowed. May be irritating to mouth, throat, and stomach.

INHALATION: Prolonged inhalation may be harmful. May be irritating to mucous membranes and lung tissue.

CHRONIC INFORMATION: Overexposure may cause nervous system damage, lung damage, kidney damage, or liver disorder and damage.

PRIMARY ROUTE(S) OF ENTRY: Ingestion

4. FIRST AID MEASURES

EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Get medical attention, if irritation persists.

SKIN CONTACT: Wash with soap and water. Get medical attention if irritation develops or persists.

INHALATION: Remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention.

INGESTION: If swallowed induce vomiting as directed by medical personnel. Never give anything by mouth to an unconscious person. Contact a poison control center of medical personnel immediately.

5. FIRE FIGHTING MEASURES

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FLASH POINT: >200 F
(TAGLIABUE CLOSED CUP)

LOWER EXPLOSIVE LIMIT: N.A.
UPPER EXPLOSIVE LIMIT: N.A.

AUTOIGNITION TEMPERATURE: N/A

EXTINGUISHING MEDIA: CO2 DRY CHEMICAL FOAM WATER FOG

UNUSUAL FIRE AND EXPLOSION HAZARDS: Empty containers retain product residue and can be dangerous.

SPECIAL FIRE FIGHTING PROCEDURES: As in any fire, wear a self-contained breathing apparatus pressure-demand (MSHA/NIOSH approved or equivalent) and full protective gear.

6. ACCIDENTIAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Absorb spill with inert material (e.g. dry sand or earth), then place into a chemical waste container. (See exposure controls / personal protection section) Spilled material should be disposed of according to applicable regulations.

7. HANDLING AND STORAGE

HANDLING: Wash thoroughly after handling.

STORAGE: Keep container closed when not in use. Store in a cool, dry, well ventilated place away from incompatible materials.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Local exhaust ventilation may be necessary to control any air contaminants to within their exposure limits.

RESPIRATORY PROTECTION: Use a NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge when airborne concentrations are expected to exceed exposure limits. Protection by air purifying respirators is limited.

SKIN PROTECTION: When contact is likely wear chemical resistant gloves and boots.

EYE PROTECTION: Wear safety glasses with side shields or goggles.

OTHER PROTECTIVE EQUIPMENT: Emergency eye wash stations and deluge showers should be available in the work area.

HYGIENIC PRACTICES: Wash hands before eating. Use only with adequate ventilation. Remove contaminated clothing and wash before reuse. Ground and bond containers when transferring material.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Lt. yellow

ODOR: N.D.

BOILING POINT (RANGE): 339-387 F

FREEZE POINT: N.D.

VAPOR DENSITY: N/D

VAPOR PRESSURE: N/A

PHYSICAL STATE: Liquid

SOLUBILITY IN WATER: Complete

PH (AS IS): 6-8

SPECIFIC GRAVITY: 1.1050

10. STABILITY AND REACTIVITY DATA

CONDITIONS TO AVOID: Avoid temperature extremes.

INCOMPATIBILITY: Avoid contact with strong acids and bases.

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of carbon and nitrogen.

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HAZARDOUS POLYMERIZATION: Will not occur under normal use and storage conditions.

CHEMICAL STABILITY: This product is stable under normal storage conditions.

11. TOXICOLOGICAL INFORMATION

ORAL: No product information is available.

DERMAL: No product information is available.

INHALATION: No product information is available.

12. ECOLOGICAL INFORMATION

ECOTOXICITY: No product information is available.

CHEMICAL FATE INFORMATION: No product information is available.

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL: Consult local, state, or federal regulatory agencies for acceptable disposal procedures and disposal locations. Disposal in streams or sewers may be prohibited by federal, state, and local regulations.

RCRA STATUS: Not determined.

14. TRANSPORTATION INFORMATION

(NON-BULK SHIPMENTS)

D.O.T. PROPER SHIPPING NAME: Not Regulated

D.O.T. TECHNICAL NAME: Non-hazardous for D.O.T. purposes

D.O.T. HAZARD CLASS: N/A

HAZARD SUBCLASS: N/A

D.O.T. UN NUMBER: N/A

PACKING GROUP: N/A

RESP. GUIDE PAGE: N/A

(BULK SHIPMENTS)

D.O.T. PROPER SHIPPING NAME: Not Regulated

D.O.T. TECHNICAL NAME: Non-hazardous for D.O.T. purposes

D.O.T. HAZARD CLASS: N/A

HAZARD SUBCLASS: N/A

D.O.T. UN NUMBER: N/A

PACKING GROUP: N/A

RESP. GUIDE PAGE: N/A

T.D.G. PROPER SHIPPING NAME: Not Regulated

T.D.G. TECHNICAL NAME: Non-hazardous for D.O.T. purposes

T.D.G. HAZARD CLASS: N/A

HAZARD SUBCLASS: N/A

T.D.G. UN NUMBER: N/A

PACKING GROUP: N/A

RESP. GUIDE PAGE: N/A

IMDG PROPER SHIPPING NAME: Not Regulated

IMDG TECHNICAL NAME: Non-hazardous for D.O.T. purposes

IMDG HAZARD CLASS: N/A

HAZARD SUBCLASS: N/A

IMDG UN NUMBER: N/A

PACKING GROUP: N/A

EmS No.: N/A

15. REGULATORY INFORMATION

CERCLA – SARA HAZARD CATEGORY:

SECTION 311/312: This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendments and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

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IMMEDIATE HEALTH HAZARD

SARA SECTION 313: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

<u>COMPONENT</u>	<u>CAS#</u>	<u>% BY WEIGHT</u>
Ethylene Glycol	107-21-1	10-30 %

TSCA STATUS:

All components of this product are listed on the Toxic Substance Control Act Inventory or are excluded from the listing requirements.

INTERNATIONAL REGULATIONS:

CANADIAN WHMIS: This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: D-2B

CANADIAN ENVIRONMENTAL PROTECTION ACT:

All components of this product are listed on the Canadian Domestic Substance List (DSL).

16. OTHER INFORMATION

HMIS RATING – HEALTH: 1 **FLAMMABILITY:** 1 **REACTIVITY:** 0 **PERSONAL PROTECTIVE RATING:** B

LEGEND: N.A. – NOT APPLICABLE, N.E. - NOT ESTABLISHED, N.D. – NOT DETERMINED

THIS PRODUCT'S HEALTH AND SAFETY INFORMATION IS PROVIDED TO ASSIST OUR CUSTOMERS IN ASSESSING COMPLIANCE WITH HEALTH, SAFETY AND ENVIRONMENTAL REGULATIONS. THE INFORMATION CONTAINED HEREIN IS BASED ON DATA AVAILABLE TO US, AND IS BELIEVED TO BE ACCURATE, ALTHOUGH NO GUARANTEE OR WARRANTY IS PROVIDED OR IMPLIED BY THE COMPANY IN THIS RESPECT. SINCE THE USE OF THIS PRODUCT IS WITHIN THE EXCLUSIVE CONTROL OF THE USER, IT IS THE USER'S RESPONSIBILITY TO DETERMINE THE CONDITIONS OF SAFE USE. SUCH CONDITIONS MUST COMPLY WITH ALL GOVERNMENTAL REGULATIONS.



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HEALTH	3
FLAMMABILITY	1
REACTIVITY	1
PERSONAL PROTECTION	I

24 hr. Emergency Contact (CHEMTREC) US Tel: 1- 800 - 424-9300 - Int'l. Tel. 703 - 527 - 3887

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

SUPPLIER: CLEARWATER INTERNATIONAL L.L.C.
515 POST OAK BLVD., SUITE 600
HOUSTON, TX 77027

MANUFACTURER: CLEARWATER INTERNATIONAL L.L.C.
100 INDUSTRIAL DRIVE
LEETSDALE, PA 15056

PRODUCT NAME: BIO-CLEAR® 200

PRODUCT CODE: WAT5230A

PRODUCT USE/CLASS:

MSDS REVISION DATE: 06/19/06

PREPARER: KS

PHONE: 713-693-4154

2. COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT	EXPOSURE LIMITS	CAS#	% BY WEIGHT
2,2-DIBROMO-3-NITRILOPROPIONAMIDE	NONE ESTABLISHED	10222-01-2	20 %
POLYETHYLENE GLYCOL MIXTURE	NONE ESTABLISHED	25322-68-3	30-60 %

3. HAZARD IDENTIFICATION

EYE: Corrosive, contact with eyes will cause burns and permanent tissue damage.

SKIN: May cause skin irritation. Allergic reactions are possible. May cause skin sensitization, an allergic reaction which becomes evident on re-exposure to this material.

INGESTION: Single dose oral toxicity is considered to be low moderate. Swallowing small amounts are not likely to cause injury. Large amounts however may cause injury, even death.

INHALATION: Trace levels of cyanogens bromide and dibromoacetonitrile vapors may be present in unvented containers and may be irritating. Mist may cause irritation of upper respiratory tract.

CHRONIC INFORMATION: Excessive exposure may increase the blood and tissue levels of bromine.

PRIMARY ROUTE(S) OF ENTRY: Inhalation and Eye contact.

4. FIRST AID MEASURES

EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Get medical attention, if irritation persists.

SKIN CONTACT: Wash with soap and water. Get medical attention if irritation develops or persist.

INHALATION: Remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention.



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INGESTION: Induce vomiting as directed by medical personnel. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

5. FIRE FIGHTING MEASURES

FLASH POINT: >212F
(TAGLIABUE CLOSED CUP)

LOWER EXPLOSIVE LIMIT: N.A.
UPPER EXPLOSIVE LIMIT: N.A.

AUTOIGNITION TEMPERATURE: N.D.

EXTINGUISHING MEDIA: Product will not support combustion. Use media suitable for surrounding materials.

UNUSUAL FIRE AND EXPLOSION HAZARDS: May contain toxic and irritating fumes in a fire.

SPECIAL FIRE FIGHTING PROCEDURES: As in any fire, wear a self-contained breathing apparatus pressure-demand (MSHA/NIOSH approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Absorb spill with inert material (e.g. dry sand or earth), then place into a chemical waste container. (See exposure controls / personal protection section) Spilled material should be disposed of according to applicable regulations.

7. HANDLING AND STORAGE

HANDLING: Handle all chemicals with care. Wear appropriate personnel protective equipment as outlined in section 8. Wash thoroughly after handling. Avoid contact with vapors from head space of containers. Wash thoroughly after handling.

STORAGE: Keep container closed when not in use. Store in a cool, dry, well ventilated place away from incompatible materials. Store below 95F/35C. Storage must be in original container. Keep container tightly closed

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Local exhaust ventilation may be necessary to control any air contaminants to within their exposure limits.

RESPIRATORY PROTECTION: Use a NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge when airborne concentrations are expected to exceed exposure limits. Protection by air purifying respirators is limited.

SKIN PROTECTION: When contact is likely wear chemical resistant gloves and boots.

EYE PROTECTION: Wear safety glasses with side shields or goggles.

OTHER PROTECTIVE EQUIPMENT: Emergency eye wash stations should be available in the work area.

HYGIENIC PRACTICES: Wash hands before eating. Use only with adequate ventilation. Remove contaminated clothing and wash before reuse. Avoid contact with eyes, skin, and clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Clear, light Yellow to Amber liquid

ODOR: Mild antiseptic



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BOILING POINT (RANGE): >120C
FREEZE POINT: -50C
VAPOR DENSITY: Lighter than air
VAPOR PRESSURE: 2X10 (-5) mmHg
PHYSICAL STATE: Liquid
SOLUBILITY IN WATER: Miscible in all proportions
PH (AS IS): 1.5-5.0
SPECIFIC GRAVITY: 1.250 mg/l

10. STABILITY AND REACTIVITY DATA

CONDITIONS TO AVOID: Avoid temperature extremes (>158F).

INCOMPATIBILITY: Avoid contact with strong bases.

HAZARDOUS DECOMPOSITION PRODUCTS: may include Bromine, Cyanogen bromide, dibromoacetonitrile, or carbon dioxide.

HAZARDOUS POLYMERIZATION: Will not occur under normal use and storage conditions.

CHEMICAL STABILITY: This product is stable under normal storage conditions.

11. TOXICOLOGICAL INFORMATION

ORAL: The LD50 is 510 mg/kg (rat).

DERMAL: The LD50 for skin is >2000 mg/kg (rabbit).

INHALATION: The LC50 for fine dust is 1.4 mg/L (male rats).
1.25 mg/L (female rats).

12. ECOLOGICAL INFORMATION

ECOTOXICITY: Based on information for DBNPA, material is highly toxic to aquatic organisms on an acute basis (LC50 between 0.1 and 1.0 mg/L in most sensitive species). Based on information for tetraethylene glycol. Material is practically non-toxic to fish on an acute basis (LC 50 greater than 100 mg/L). Based on information for this product, growth inhibition EC50 for marine diatom *Skeletonema costatum* is 0.53 mg/L. Acute LC50 for marine copepod *Acartia tonsa* is 1.78 mg/L.

CHEMICAL FATE INFORMATION: Based on the stringent test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL: Consult local, state, or federal regulatory agencies for acceptable disposal procedures and disposal locations. Disposal in streams or sewers may be prohibited by federal, state, and local regulations.

RCRA STATUS: Not determined.

14. TRANSPORTATION INFORMATION



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(NON-BULK SHIPMENTS)

D.O.T. PROPER SHIPPING NAME: Not Regulated
D.O.T. TECHNICAL NAME: Non-hazardous for D.O.T. purposes
D.O.T. HAZARD CLASS: N/A **HAZARD SUBCLASS:** N/A
D.O.T. UN NUMBER: N/A **PACKING GROUP:** N/A **RESP. GUIDE PAGE:** N/A

(BULK SHIPMENTS)

D.O.T. PROPER SHIPPING NAME: Not Regulated
D.O.T. TECHNICAL NAME: Non-hazardous for D.O.T. purposes
D.O.T. HAZARD CLASS: N/A **HAZARD SUBCLASS:** N/A
D.O.T. UN NUMBER: N/A **PACKING GROUP:** N/A **RESP. GUIDE PAGE:** N/A

T.D.G. PROPER SHIPPING NAME: Not Regulated
T.D.G. TECHNICAL NAME: Non-hazardous for D.O.T. purposes
T.D.G. HAZARD CLASS: N/A **HAZARD SUBCLASS:** N/A
T.D.G. UN NUMBER: N/A **PACKING GROUP:** N/A **RESP. GUIDE PAGE:** N/A

IMDG PROPER SHIPPING NAME: Not Regulated
IMDG TECHNICAL NAME: Non-hazardous for D.O.T. purposes
IMDG HAZARD CLASS: N/A **HAZARD SUBCLASS:** N/A
IMDG UN NUMBER: N/A **PACKING GROUP:** N/A **EmS No.:** N/A

15. REGULATORY INFORMATION

CERCLA – SARA HAZARD CATEGORY:

SECTION 311/312: This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendments and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD CHRONIC HEALTH HAZARD FIRE HAZARD

SARA SECTION 313: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

<u>COMPONENT</u>	<u>CAS#</u>	<u>% BY WEIGHT</u>
2, 2-Dibromo-3-Nitrilopropionamide	10222-01-2	20 %

TSCA STATUS:

All components of this product are listed on the Toxic Substance Control Act Inventory or are excluded from the listing requirements.

INTERNATIONAL REGULATIONS:

CANADIAN WHMIS: This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.





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CANADIAN WHMIS CLASS: D1B

CANADIAN ENVIRONMENTAL PROTECTION ACT:

All components of this product are listed on the Canadian Domestic Substance List (DSL).

16. OTHER INFORMATION

HMIS RATING – HEALTH: 3 **FLAMMABILITY:** 1 **REACTIVITY:** 1 **PERSONAL PROTECTIVE RATING:** I

VERSION NUMBER: 2

REPLACES: Version 1 dated 11/15/05.

REVISION INFORMATION: Changes in section 14.

LEGEND: N.A. – NOT APPLICABLE, N.E. - NOT ESTABLISHED, N.D. – NOT DETERMINED

THIS PRODUCT'S HEALTH AND SAFETY INFORMATION IS PROVIDED TO ASSIST OUR CUSTOMERS IN ASSESSING COMPLIANCE WITH HEALTH, SAFETY AND ENVIRONMENTAL REGULATIONS. THE INFORMATION CONTAINED HEREIN IS BASED ON DATA AVAILABLE TO US, AND IS BELIEVED TO BE ACCURATE, ALTHOUGH NO GUARANTEE OR WARRANTY IS PROVIDED OR IMPLIED BY THE COMPANY IN THIS RESPECT. SINCE THE USE OF THIS PRODUCT IS WITHIN THE EXCLUSIVE CONTROL OF THE USER, IT IS THE USER'S RESPONSIBILITY TO DETERMINE THE CONDITIONS OF SAFE USE. SUCH CONDITIONS MUST COMPLY WITH ALL GOVERNMENTAL REGULATIONS.



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Material Safety Data Sheet OB BREAKER

HEALTH	2
FLAMMABILITY	0
REACTIVITY	1
PERSONAL PROTECTION	B

24 hr. Emergency Contact (CHEMTREC) US Tel: 1- 800 - 424-9300 - Int'l. Tel. 703 - 527 - 3887

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

SUPPLIER: CLEARWATER INTERNATIONAL L.L.C.
515 POST OAK BLVD., SUITE 600
HOUSTON, TX 77027

MANUFACTURER: CLEARWATER INTERNATIONAL L.L.C.
100 INDUSTRIAL DRIVE
LEETSDALE, PA 15056

PRODUCT NAME: OB BREAKER
PRODUCT CODE: FRA5041G
DPRODUCT USE/CLASS: Gel Breaker

MSDS REVISION DATE: 05/08/03

PREPARER: MJW

PHONE: 724-318-1050

2. COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT	EXPOSURE LIMITS	CAS#	% BY WEIGHT
AMMONIUM PERSULFATE	None Established	7727-54-0	60-100%
PROPRIETARY COMPONENT	None Established	XXXX-XX-X	5-10%

3. HAZARD IDENTIFICATION

EYE: Dust of this product may be irritating and can cause pain, tearing, reddening and swelling.

SKIN: May cause skin irritation. Allergic reactions are possible.

INGESTION: May be harmful or even fatal if swallowed. Irritating to mouth, throat, and stomach.

INHALATION: May be irritating to mucous membranes and lung tissue.

CHRONIC INFORMATION: None known.

PRIMARY ROUTE(S) OF ENTRY: Ingestion and Eye contact.

4. FIRST AID MEASURES

EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Get medical attention, if irritation persists.

SKIN CONTACT: Wash with soap and water. Get medical attention if irritation develops or persist.

INHALATION: Remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention.

INGESTION: If swallowed, Induce vomiting. Do not give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

5. FIRE FIGHTING MEASURES

FLASH POINT: N.A.
(TAGLIABUE CLOSED CUP)

LOWER EXPLOSIVE LIMIT: N.A.
UPPER EXPLOSIVE LIMIT: N.A.

Material Safety Data Sheet

OB BREAKER

AUTOIGNITION TEMPERATURE: N.A.

EXTINGUISHING MEDIA: Use media suitable for surrounding materials.

UNUSUAL FIRE AND EXPLOSION HAZARDS: May form explosive mixtures in air. Static ignition hazard if dust conditions exist.

SPECIAL FIRE FIGHTING PROCEDURES: As in any fire, wear a self-contained breathing apparatus pressure-demand (MSHA/NIOSH approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Sweep material into a pile and then place into a chemical waste container. Use caution to avoid creating dusty conditions. (See exposure controls / personal protection section) Spilled material should be disposed of according to applicable regulations.

7. HANDLING AND STORAGE

HANDLING: Wash thoroughly after handling.

STORAGE: Keep container closed when not in use. Store in a cool, dry, well ventilated place away from incompatible materials.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Good general ventilation should be sufficient to control airborne levels.

RESPIRATORY PROTECTION: No protection needed under normal use and conditions. Use a NIOSH/MSHA approved particulate respirator when inadequate ventilation exist or when high airborne concentrations are expected.

SKIN PROTECTION: When contact is likely wear chemical resistant gloves and boots.

EYE PROTECTION: Wear safety glasses with side shields or goggles.

OTHER PROTECTIVE EQUIPMENT: Emergency eye wash stations should be available in the work area.

HYGIENIC PRACTICES: Wash hands before eating.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: White crystals

ODOR: N.D.

BOILING POINT (RANGE): N/A

FREEZE POINT: Decomposes

VAPOR DENSITY: N/A

VAPOR PRESSURE: N/A

PHYSICAL STATE: Solid

SOLUBILITY IN WATER: 51% @ 77F

PH (AS IS): 4-6

BULK DENSITY: N/D

10. STABILITY AND REACTIVITY DATA

CONDITIONS TO AVOID: Avoid creating dust. Avoid temperature extremes.

INCOMPATIBILITY: Avoid contact with heavy metals. Avoid contact with water.

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of nitrogen and sulfur.

HAZARDOUS POLYMERIZATION: Will not occur under normal use and storage conditions.

CHEMICAL STABILITY: This product is stable under normal storage conditions.

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OB BREAKER

11. TOXICOLOGICAL INFORMATION

ORAL: No product information is available.

DERMAL: No product information is available.

INHALATION: No product information is available.

12. ECOLOGICAL INFORMATION

ECOTOXICITY: No product information is available.

CHEMICAL FATE INFORMATION: No product information is available.

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL: Consult local, state, or federal regulatory agencies for acceptable disposal procedures and disposal locations. Disposal in streams or sewers may be prohibited by federal, state, and local regulations.

RCRA STATUS: Not determined.

14. TRANSPORTATION INFORMATION

(NON-BULK SHIPMENTS)

D.O.T. PROPER SHIPPING NAME: Ammonium Persulfate Blend

D.O.T. TECHNICAL NAME:

D.O.T. HAZARD CLASS: 5.1

D.O.T. UN NUMBER: UN1444

HAZARD SUBCLASS: N/A

PACKING GROUP: III

RESP. GUIDE PAGE: 140

(BULK SHIPMENTS)

D.O.T. PROPER SHIPPING NAME: Ammonium Persulfate Blend

D.O.T. TECHNICAL NAME:

D.O.T. HAZARD CLASS: 5.1

D.O.T. UN NUMBER: UN1444

HAZARD SUBCLASS: N/A

PACKING GROUP: III

RESP. GUIDE PAGE: 140

T.D.G. PROPER SHIPPING NAME: Ammonium Persulfate Blend

T.D.G. TECHNICAL NAME:

T.D.G. HAZARD CLASS: 5.1

T.D.G. UN NUMBER: UN1444

HAZARD SUBCLASS: N/A

PACKING GROUP: N/A

RESP. GUIDE PAGE: 140

IMDG PROPER SHIPPING NAME: Ammonium Persulfate Blend

IMDG TECHNICAL NAME:

IMDG HAZARD CLASS: 5.1

IMDG UN NUMBER: UN1444

HAZARD SUBCLASS: N/A

PACKING GROUP: N/A

EmS No.: F-A, S-Q

15. REGULATORY INFORMATION

CERCLA – SARA HAZARD CATEGORY:

SECTION 311/312: This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendments and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

FIRE HAZARD REACTIVITY HAZARD

SARA SECTION 313: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

Material Safety Data Sheet

OB BREAKER

COMPONENT**CAS#****% BY WEIGHT**

No SARA Section 313 components exist in this product.

TSCA STATUS:

All components of this product are listed on the Toxic Substance Control Act Inventory or are excluded from the listing requirements.

INTERNATIONAL REGULATIONS:

CANADIAN WHMIS: This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: C, D-2B

CANADIAN ENVIRONMENTAL PROTECTION ACT:

All components of this product are listed on the Canadian Domestic Substance List (DSL).

16. OTHER INFORMATION

HMIS RATING – HEALTH: 2 **FLAMMABILITY:** 0 **REACTIVITY:** 1 **PERSONAL PROTECTIVE RATING:** B

LEGEND: N.A. – NOT APPLICABLE, N.E. - NOT ESTABLISHED, N.D. – NOT DETERMINED

THIS PRODUCT'S HEALTH AND SAFETY INFORMATION IS PROVIDED TO ASSIST OUR CUSTOMERS IN ASSESSING COMPLIANCE WITH HEALTH, SAFETY AND ENVIRONMENTAL REGULATIONS. THE INFORMATION CONTAINED HEREIN IS BASED ON DATA AVAILABLE TO US, AND IS BELIEVED TO BE ACCURATE, ALTHOUGH NO GUARANTEE OR WARRANTY IS PROVIDED OR IMPLIED BY THE COMPANY IN THIS RESPECT. SINCE THE USE OF THIS PRODUCT IS WITHIN THE EXCLUSIVE CONTROL OF THE USER, IT IS THE USER'S RESPONSIBILITY TO DETERMINE THE CONDITIONS OF SAFE USE. SUCH CONDITIONS MUST COMPLY WITH ALL GOVERNMENTAL REGULATIONS.



Material Safety Data Sheet SUPER-100NE

HEALTH	2
FLAMMABILITY	3
REACTIVITY	0
PERSONAL PROTECTION	G

24 hr. Emergency Contact (CHEMTREC) US Tel: 1- 800 - 424-9300 - Int'l. Tel. 703 - 527 - 3887

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

SUPPLIER: CLEARWATER INTERNATIONAL L.L.C.
515 POST OAK BLVD., SUITE 600
HOUSTON, TX 77027

MANUFACTURER: CLEARWATER INTERNATIONAL L.L.C.
100 INDUSTRIAL DRIVE
LEETSDALE, PA 15056

PRODUCT NAME: SUPER-100NE
PRODUCT CODE:FOA0911A
PRODUCT USE/CLASS:

MSDS REVISION DATE: 03/09/04

PREPARER: MJW

PHONE: 724-318-1050

2. COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT	EXPOSURE LIMITS	CAS#	% BY WEIGHT
ISOPROPYL ALCOHOL	ACGIH TLV – 400 ppm TWA, 500 ppm STEL OSHA PEL – 400 ppm TWA, 500 ppm CEILING	67-63-0	10-30 %
GLYCOL ETHERS	ACGIH TLV – 25 ppm TWA OSHA PEL – 25 ppm TWA	111-76-2	3-7 %

3. HAZARD IDENTIFICATION

EYE: Liquid, aerosols and vapors of this product may be irritating and can cause pain, tearing, reddening and swelling accompanied by a stinging sensation and/or a feeling like that of fine dust in the eyes.

SKIN: May cause skin irritation. Allergic reactions are possible.

INGESTION: May be irritating to mouth, throat, and stomach.

INHALATION: Prolonged inhalation may be harmful or fatal. May be irritating to mucous membranes and lung tissue.

CHRONIC INFORMATION: Over exposure may cause central nervous system, kidney and liver damage.

PRIMARY ROUTE(S) OF ENTRY: Skin absorption, Inhalation, Ingestion, and Eye contact

4. FIRST AID MEASURES

EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Get medical attention, if irritation persists.

SKIN CONTACT: Remove contaminated clothing. Wash with soap and water. Get medical attention if irritation develops or persists.

INHALATION: Remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention.

INGESTION: If swallowed induce vomiting as directed by medical personnel. Never give anything by mouth to an unconscious person. Contact a poison control center of medical personnel immediately.

5. FIRE FIGHTING MEASURES

Material Safety Data Sheet

SUPER-100NE

FLASH POINT: 80 F
(TAGLIABUE CLOSED CUP)

LOWER EXPLOSIVE LIMIT: 2%
UPPER EXPLOSIVE LIMIT: 12%

AUTOIGNITION TEMPERATURE: N.D.

EXTINGUISHING MEDIA: ALCOHOL FOAM CO2 DRY CHEMICAL FOAM WATER FOG

UNUSUAL FIRE AND EXPLOSION HAZARDS: Vapors may form explosive mixture with air. Flammable liquid. Can release vapors that form explosive mixtures at temperatures at or above the flashpoint. "Empty" containers retain product residue (liquid and /or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUS INJURY OR DEATH. Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioned, or properly disposed of.

SPECIAL FIRE FIGHTING PROCEDURES: Containers can build up pressure if exposed to heat (fire). As in any fire, wear a self-contained breathing apparatus pressure-demand (MSHA/NIOSH approved or equivalent) and full protective gear. Apply alcohol-type foam or all purpose foam by manufacturers recommended techniques for large fires. Use carbon dioxide or dry chemicals media for small fires. Use water spray to cool containers.

6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Extinguish any possible ignition source until the area is determined to be free from fire or explosion hazard. Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container. (See exposure controls / personal protection section) Spilled material should be disposed of according to applicable regulations.

7. HANDLING AND STORAGE

HANDLING: Handle all chemicals with care. Ground and bond containers when transferring materials.

STORAGE: Keep away from heat, sparks, and flames. Keep container closed when not in use. Store in a cool, dry, well ventilated place away from incompatible materials.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Local exhaust ventilation may be necessary to control any air contaminants to within their exposure limits.

RESPIRATORY PROTECTION: Use a NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge when airborne concentrations are expected to exceed exposure limits. Protection by air purifying respirators is limited.

SKIN PROTECTION: When contact is likely wear chemical resistant gloves and boots.

EYE PROTECTION: Wear safety glasses with side shields or goggles.

OTHER PROTECTIVE EQUIPMENT: Emergency eye wash stations and deluge showers should be available in the work area.

HYGIENIC PRACTICES: Wash hands before eating. Use only with adequate ventilation. Remove contaminated clothing and wash before reuse. Ground and bond containers when transferring material.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Yellow

ODOR: N.D.

BOILING POINT (RANGE): 180 F

FREEZE POINT: N.D.

VAPOR DENSITY: Is heavier than air

VAPOR PRESSURE: N.D.

PHYSICAL STATE: Liquid

SOLUBILITY IN WATER: N.D.

PH (AS IS): 6-8

Material Safety Data Sheet

SUPER-100NE

SPECIFIC GRAVITY: 1.035

10. STABILITY AND REACTIVITY DATA

CONDITIONS TO AVOID: Avoid temperature extremes. Excessive heat causes the vapor pressure to increase rapidly.

INCOMPATIBILITY: Avoid contact with base, chlorine, metal nitrates, heat, and fuming nitric acid. Avoid contact with strong acids and oxidizers.

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of carbon.

HAZARDOUS POLYMERIZATION: Will not occur under normal use and storage conditions.

CHEMICAL STABILITY: This product is stable under normal storage conditions.

11. TOXICOLOGICAL INFORMATION

ORAL: No product information is available.

DERMAL: No product information is available.

INHALATION: No product information is available.

12. ECOLOGICAL INFORMATION

ECOTOXICITY: No product information is available.

CHEMICAL FATE INFORMATION: No product information is available.

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL: Consult local, state, or federal regulatory agencies for acceptable disposal procedures and disposal locations. Disposal in streams or sewers may be prohibited by federal, state, and local regulations.

RCRA STATUS: D001 –Characteristic of ignitability

14. TRANSPORTATION INFORMATION

(NON-BULK SHIPMENTS)

D.O.T. PROPER SHIPPING NAME: Flammable Liquid, N.O.S.

D.O.T. TECHNICAL NAME: Contains Isopropanol

D.O.T. HAZARD CLASS: 3

HAZARD SUBCLASS: N/A

D.O.T. UN NUMBER: UN 1993

PACKING GROUP: III

RESP. GUIDE PAGE: 128

(BULK SHIPMENTS)

D.O.T. PROPER SHIPPING NAME: Flammable Liquid, N.O.S.

D.O.T. TECHNICAL NAME: Contains Isopropanol

D.O.T. HAZARD CLASS: 3

HAZARD SUBCLASS: N/A

D.O.T. UN NUMBER: UN 1993

PACKING GROUP: III

RESP. GUIDE PAGE: 128

T.D.G. PROPER SHIPPING NAME: Flammable Liquid, N.O.S.

T.D.G. TECHNICAL NAME: Contains Isopropanol

T.D.G. HAZARD CLASS: 3

HAZARD SUBCLASS: N/A

T.D.G. UN NUMBER: UN 1993

PACKING GROUP: III

RESP. GUIDE PAGE: 128

IMDG PROPER SHIPPING NAME: Flammable Liquid, N.O.S.

IMDG TECHNICAL NAME: Contains Isopropanol

IMDG HAZARD CLASS: 3

HAZARD SUBCLASS: N/A

Material Safety Data Sheet

SUPER-100NE

IMDG UN NUMBER: UN 1993

PACKING GROUP: III

EmS No.: F-E, S-D

15. REGULATORY INFORMATION

CERCLA – SARA HAZARD CATEGORY:

SECTION 311/312: This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendments and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

FIRE HAZARD CHRONIC HEALTH HAZARD

SARA SECTION 313: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

<u>COMPONENT</u>	<u>CAS#</u>	<u>% BY WEIGHT</u>
Glycol Ethers	111-76-2	3-7 %

TSCA STATUS:

All components of this product are listed on the Toxic Substance Control Act Inventory or are excluded from the listing requirements.

INTERNATIONAL REGULATIONS:

CANADIAN WHMIS: This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: B-2, D-2B

CANADIAN ENVIRONMENTAL PROTECTION ACT:

All components of this product are listed on the Canadian Domestic Substance List (DSL).

16. OTHER INFORMATION

HMIS RATING – HEALTH: 2 **FLAMMABILITY:** 3 **REACTIVITY:** 0 **PERSONAL PROTECTIVE RATING:** G

LEGEND: N.A. – NOT APPLICABLE, N.E. - NOT ESTABLISHED, N.D. – NOT DETERMINED

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