Material Safety Data Sheet

AP BREAKER

1. Product and Company Identification

Material name	**AP BREAKER**
Patent Number	Not available
Revision date	April-08-2011
Version No.	7
CAS #	Mixture
Product use	Gel Breaker
Manufacturer information	Clearwater™ International L.L.C. 4420 South Flores Road Elmendorf, TX 78112 US CHEMTREC 1-800-424-9300/703-527-3887
Emergency	CHEMTREC 1-800-424-9300/703-527-3887
Supplier information	Producers Service Corp. 109 South Graham St. Zanesville, OH 43701 US
Supplier emergency telephone number(s)	24hr customer Service 740-454-6253

2. Hazards Identification

Emergency overview	DANGER -- OXIDIZER Toxic if swallowed. Corrosive. Causes skin and eye burns. Harmful by inhalation, in contact with skin and if swallowed. This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA. Strong oxidizer. Contact with other combustible material can cause fire.
OSHA regulatory status	This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).
Potential health effects	
Routes of exposure	Ingestion. Inhalation. Skin contact. Eye contact.
Eyes	This product causes eye burns. Risk of serious damage to eyes. Do not get this material in contact with eyes.
Skin	Causes skin burns. Do not get this material in contact with skin.
Inhalation	Causes burns. Do not breathe dust/fume/gas/mist/vapors/spray.
Ingestion	Toxic if swallowed. Ingestion may produce burns to the lips, oral cavity, upper airway, esophagus and possibly the digestive tract. Do not ingest.
Potential environmental effects	May cause long-term adverse effects in the environment.

3. Composition / Information on Ingredients

Components	CAS #	Percent
Ammonium Persulfate	7727-54-0	90 - 100

4. First Aid Measures

First aid procedures

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes.

Skin contact Immediately flush skin with plenty of water. Remove and isolate contaminated clothing and shoes. For minor skin contact, avoid spreading material on unaffected skin. Wash clothing separately before reuse.

Inhalation Move to fresh air. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Ingestion Get medical attention immediately. Have victim rinse mouth thoroughly with water. Do not induce vomiting without medical advice. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Never give anything by mouth to a victim who is unconscious or is having convulsions.

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. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire Fighting Measures

Flammable properties Containers may explode when heated. Some will react explosively with hydrocarbons (fuels). May explode from heat or contamination. Some may decompose explosively when heated or involved in a fire. Runoff may create fire or explosion hazard. These substances will accelerate burning when involved in a fire. Contact with combustible material may cause fire.

Extinguishing media

Suitable extinguishing media Water. Dry chemical, CO2, water spray or regular foam.

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. Do not move cargo or vehicle if cargo has been exposed to heat. 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. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Move containers from fire area if you can do it without risk. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn. Use water spray to cool unopened containers. Cool containers with flooding quantities of water until well after fire is out.

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. Isolate spill or leak area immediately for at least 50 to 100 meters (150 to 330 feet) in all directions. Stay upwind. Keep out of low areas.
Environmental precautions	Runoff from fire control or dilution water may cause pollution.
Methods for containment	Stop leak if you can do so without risk. Keep combustibles (wood, paper, oil, etc.) away from spilled material. Prevent entry into waterways, sewers, basements or confined areas.
Methods for cleaning up	Should not be released into the environment. Sweep up or gather material and place in appropriate container for disposal. Avoid dust formation. After removal flush contaminated area thoroughly with water.
Other information	Clean up in accordance with all applicable regulations.

7. Handling and Storage

Handling	Do not handle or store near an open flame, heat or other sources of ignition. Keep away from clothing and other combustible materials. Use only with adequate ventilation. Wear self-contained breathing apparatus and protective suit. Do not get this material in contact with eyes. Do not get this material in contact with skin. Avoid release to the environment. Do not get this material on clothing. Wash thoroughly after handling.
Storage	Keep tightly closed in a dry, cool and well-ventilated place. Store in a closed container away from incompatible materials. Keep out of the reach of children. Store in accordance with local/regional/national/international regulation.

8. Exposure Controls / Personal Protection

Engineering controls	Ensure adequate ventilation, especially in confined areas.
Personal protective equipment	
Eye / face protection	Do not get this material in contact with eyes. Wear chemical goggles. Face-shield.
Skin protection	Do not get this material in contact with skin. Do not get this material on clothing. Wear chemical protective equipment that is specifically recommended by the manufacturer. It may provide little or no thermal protection. Wear appropriate chemical resistant gloves. Use chemical splash goggles and face shield (ANSI Z87.1 or approved equivalent). Structural firefighters protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations.
Respiratory protection	When dusts or thermal processing fumes are generated and ventilation is not sufficient to effectively remove them, appropriate NIOSH/MSHA approved respiratory protection must be provided.
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. Wash hands after handling and before eating.

9. Physical & Chemical Properties

Appearance	White crystals or powder.
Color	White

Odor	Odorless.
Odor threshold	Not available
Physical state	Solid.
Form	Solid
pH	Not available
Melting point	Not available
Freezing point	Not available
Boiling point	Not available
Flash point	201 °F (93.9 °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	Not available
Relative density	Not available
Solubility (water)	559 g/L
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Bulk density	950 - 1050 kg/m3
Molecular weight	228.18 g/mol

10. Chemical Stability & Reactivity Information

Incompatible materials	Water. Peroxides. Strong oxidizing agents.
Possibility of hazardous reactions	Hazardous polymerization does not occur.

11. Toxicological Information

Acute effects

Acute LD50: 495 mg/kg estimated, Rat, Oral
Acute LC50: 130 mg/l/4h estimated, Rat, Inhalation
Causes burns.

Component analysis - LD50

Toxicology Data - Selected LD50s and LC50s

Ammonium Persulfate	7727-54-0	Inhalation LC50 Rat: 520 mg/L/1H; Oral LD50 Rat: 495 mg/kg

Chronic effects	Not expected to be hazardous by OSHA criteria.
Carcinogenicity	Not expected to be hazardous by OSHA criteria.
Neurological effects	Not expected to be hazardous by OSHA criteria.

12. Ecological Information

Ecotoxicity

LC50 103 mg/L estimated, Fish, 96.00 Hours,
EC50 120 mg/L estimated, Daphnia, 48.00 Hours,
Components of this product have been identified as having potential environmental concerns.

Ecotoxicity - Freshwater Fish Species Data

Ammonium Persulfate	7727-54-0	96 Hr LC50 Lepomis macrochirus: 103 mg/L [static]; 96 Hr LC50 Oncorhynchus mykiss: 76.3 mg/L [static]

Ecotoxicity - Water Flea Data

Ammonium Persulfate	7727-54-0	48 Hr EC50 Daphnia magna: 120 mg/L

Environmental effects

Ecotoxicity - Freshwater Fish Species Data

Ammonium Persulfate	7727-54-0	96 Hr LC50 Lepomis macrochirus: 103 mg/L [static]; 96 Hr LC50 Oncorhynchus mykiss: 76.3 mg/L [static]

Ecotoxicity - Water Flea Data

Ammonium Persulfate	7727-54-0	48 Hr EC50 Daphnia magna: 120 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

Basic shipping requirements:

Proper shipping name	Ammonium persulfate
Hazard class	5.1
UN number	UN1444
Packing group	III
Additional information:	
Special provisions	A1, A29, IB8, IP3, T1, TP33
Packaging exceptions	152
Packaging non bulk	213
Packaging bulk	240
ERG number	140

Department of Transportation (DOT) Requirements

Bulk

Basic shipping requirements:

Proper shipping name	Ammonium persulfate
Hazard class	5.1
UN number	UN1444
Packing group	III
Additional information:	
Special provisions	A1, A29, IB8, IP3, T1, TP33
Packaging exceptions	152
Packaging non bulk	213
Packaging bulk	240
ERG number	140

Canadian Transportation of Dangerous Goods (TDG) Requirements

Basic shipping requirements:

Proper shipping name	AMMONIUM PERSULFATE
Hazard class	5.1
UN number	UN1444
Packing group	III
Additional information:	
ERG number	140

IMDG

Basic shipping requirements:

Proper shipping name	AMMONIUM PERSULPHATE
Hazard class	5.1
Subsidiary hazard class	•
UN number	1444
Packing group	III

IATA

Basic shipping requirements:

Proper shipping name	Ammonium persulphate
Hazard class	5.1
UN number	1444
Packing group	III

15. Regulatory Information

Labelling

Contains Ammonium Persulfate

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.

CERCLA/SARA Hazardous Substances - Not applicable.

Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 hazardous chemical Yes

CERCLA (Superfund) reportable quantity

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

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

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)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
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

Ammonium Persulfate	7727-54-0	0.1 %

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. - New Jersey - Right to Know Hazardous Substance List

Ammonium Persulfate	7727-54-0	sn 0111

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

Ammonium Persulfate	7727-54-0	1 µg/m3 ESL (particulate)

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

Ammonium Persulfate	7727-54-0	10 µg/m3 ESL (particulate)

16. Other Information

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

NFPA ratings
Health: 2
Flammability: 0
Instability: 1
Special hazards: OX

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MSDS sections updated
Product and Company Identification: Alternate Trade Names
Physical & Chemical Properties: Color
Other Information: MSDS footer disclaimer