



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material Name APB-1
Revision Date 12/21/2011
Version # 2
Product Use Gel Breaker.
Manufacturer / Supplier FRAC TECH SERVICES LLC
2500 HWY 62 West
Chickasha, OK 73018
US
General information: 1-405-222-2300
Emergency 24 Hour Emergency: INFOTRAC: 1-800-535-5053

2. Hazards Identification

Physical State Solid.
Appearance White Crystals.
Emergency Overview Oxidizer. Can cause burns and irritation to the skin, eyes, and respiratory tract. It is an oxidizer that may release oxygen and promote the combustion of flammable material.
OSHA regulatory status Not available.
Routes of exposure
Eyes May cause eye irritation or burning.
Skin May cause skin irritation.
Inhalation May cause respiratory tract irritation.
Ingestion Harmful if swallowed.
Potential environmental effects Not available.

3. Composition / Information on Ingredients

Components	CAS #	Percent
Ammonium Persulfate	7727-54-0	>95

Composition comments All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First Aid Measures

First aid procedures

Eye Contact Do not rub eyes. IMMEDIATELY flush eyes with running water for at least 20 minutes, keeping eyelids open. Cold water may be used. Seek medical attention if irritation persist.
Skin Contact IMMEDIATELY wash skin with soap and water for at least 20 minutes.
Inhalation Immediately go to a well ventilated area and rest. Seek immediate medical attention.
Ingestion Wash out mouth with water. Do NOT induce vomiting. If victim is conscious and alert, drink lots of water. Seek medical attention.
Notes to physician This product has moderate oral toxicity and is minimally irritating to the eyes. Flooding of exposed areas with water is suggested, but gastric lavage or emesis induction for ingestions must consider the possible aggravation injury and the expected absence of systemic effects. Treatment is controlled removal of exposure followed by symptomatic and supportive care.

5. Fire Fighting Measures

Flammable Properties This material is non combustible.

Extinguishing media

Suitable extinguishing media	WATER or WATER SPRAY ONLY! Use any means suitable for extinguishing surrounding fire.
Unsuitable extinguishing media	Not available.
Specific Hazards arising from the Chemical	Not available.

Firefighting equipment / instructions Wear full protective clothing, and NIOSH approved self-contained breathing apparatus with full face piece.

Specific Methods Not available.

Hazardous combustion products Has oxidizing properties that will cause it to burn vigorously and promote combustion of flammable materials.

6. Accidental Release Measures

Personal precautions Clean-up personnel require goggles and MSHA/NIOSH respiratory protection.

Methods for cleaning up Isolate hazard area and deny entry to unnecessary or unprotected personnel. Contain spill, sweep up, collect and place in a disposal container.

7. Handling and Storage

Handling

Storage

8. Exposure Controls / Personal Protection**Occupational exposure limits****US. ACGIH Threshold Limit Values**

Components	TWA		STEL	
	ppm	mg/m3	ppm	mg/m3
Ammonium Persulfate	Not available.	2	Not available.	Not available.

US. OSHA Table Z-1 Limits for Air Contaminates (29 CFR 1910.1000)

Components	PEL	
	ppm	mg/m3
Ammonium Persulfate	Not available.	Not available.

Canada. Alberta OELs (Occupational Health Safety Code, Schedule 1, Table 2)

Components	TWA		STEL	
	ppm	mg/m3	ppm	mg/m3
Ammonium Persulfate	Not available.	Not available.	Not available.	Not available.

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	TWA		STEL	
	ppm	mg/m3	ppm	mg/m3
Ammonium Persulfate	Not available.	Not available.	Not available.	Not available.

Canada. Ontario OELs. (Ministry of Labor - Control of Exposure to Biological or Chemical Agents) Components

Components	TWA		STEL	
	ppm	mg/m3	ppm	mg/m3
Ammonium Persulfate	Not available.	Not available.	Not available.	Not available.

Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) Components

Components	TWA		STEL	
	ppm	mg/m3	ppm	mg/m3
Ammonium Persulfate	Not available.	Not available.	Not available.	Not available.

Mexico. Occupational Exposure Limit Values

Components	TWA		STEL	
	ppm	mg/m3	ppm	mg/m3
Ammonium Persulfate	Not available.	Not available.	Not available.	Not available.

Engineering controls

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal protective equipment

Eye / face protection

Splash goggles.

Skin protection

Impermeable gloves.

Respiratory protection

Dust mask or respirator are not necessary in areas with adequate ventilation. Be sure to use MSHA/NIOSH approved respirator when ventilation is inadequate.

General hygiene consideration

Not available.

9. Physical and Chemical Properties

Appearance:	Solid White crystals
Color	White to off white
Odor	Slightly Acrid
Odor threshold	Not available.
Physical State	Solid
Form	Crystals
pH	4 - 6 (1% in water)
Melting point	Not available.
Freezing point	Not available.
Boiling point	Not available.
Flash point	Not available.
Evaporation rate	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	1.98
Solubility (water)	51% by weight
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Bulk Density	9.36 lb/gal
VOC	Not available.
Viscosity	Not available.
Percent volatile	Not available.

10. Chemical Stability Reactivity Information

Chemical Stability	This product is stable under ordinary conditions of use and storage. This product becomes unstable in the presence of moisture and reducing agents.
Conditions to avoid	Moisture, metals and incompatible materials.
Incompatible material	Highly reactive with reducing agents and organic materials. Reactive with metals and moisture. Slightly reactive with acids and alkalis. Slightly corrosive in the presence of steel. Very slightly corrosive in presence of aluminum, of zinc, and of copper.
Hazardous decomposition products	Oxides of sulfur, sulfuric and ammonia, phosphines, oxides of nitrogen, oxygen which may support combustion and ozone.
Possibility of hazardous reaction	Not available.

11. Toxicology Information

Toxicological Data

Components

Ammonium Persulfate

Test Results

Acute LD50: ORAL 820mg/kg (rat)

Moderately toxic when ingested. Dust may be harmful and irritating. Ammonium persulfate has low dermal toxicity and is moderately toxic when ingested.

Sensitization

Not available.

Carcinogenicity

Ammonium Persulfate

Not available.

Epidemiology

Not available.

Mutagenicity

Not available.

Reproductive effects

Not available.

Teratogenicity

Not available.

Further Information

Not available.

12. Ecological Information**Ecotoxicological data****Components**

Ammonium Persulfate

Test Results

Bluegill sunfish 96hr: 103
Rainbow Trout 96hr: 76.3
Daphnia 48hr: 120
Grass Shrimp 96hr: 391

Ecotoxicity

Not available.

Persistence and degradability

Not available.

Bioaccumulation / Accumulation

Not available.

Mobility in environmental media

Not available.

Partition coefficient (n-octanol/water)

Not available.

13. Disposal Considerations**Waste codes**

Not available

Disposal instructions

Recycle if possible. Dilute with water and consult your local or regional authorities for disposing of hazards.

Contaminated packaging

Not available.

14. Transport Information

DOT

UN number UN1444
Proper shipping name Ammonium Persulfate. Oxidizer
Hazard class 5.1 Oxidizer
Packing Group III
Labels required
DOT Reportable Quantity: Not available.
Additional information
Special provisions
Packaging exceptions
Packaging non bulk
Packaging bulk
ERG number

IATA

UN number
Proper shipping name Not available.
Hazard class
Packing group
Additional information
ERG code

IMDG

UN number
Proper shipping name Not available.
Hazard class
Packing group
EmS No
IMDG Additional information:

15. Regulatory Information**US federal regulation**

CERCLA (Superfund) Reportable Quantity: Not available.

Superfund amendments and Reauthorization Act of 1986 (SARA)

Hazard Categories	Immediate Hazard:	No
	Delayed Hazard:	No
	Fire Hazard:	No
	Pressure Hazard:	No
	Reactivity Hazard:	No

Inventory Status

Country	Inventory Name	On Inventory *
Australia	AICS	No
Canada	DSL	Yes
Canada	NDSL	No

China	IECSC	No
Europe	EINECS	No
Europe	ELINCS	No
Japan	ENCS	No
Korea	ECL	No
New Zealand	NZI	No
United States / Puerto Rico	TSCA	Yes
Phillipines	PICCS	No

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

WHMIS Information Not available.
State Regulation Not available.

16. Other Information

Further Information HMIS® is a registered trade and service mark of the NPCA.

HMIS® ratings Health: 1
 Flammability: 0
 Physical Hazard: 1
 A HMIS® rating including an * indicates a chronic hazard.

NFPA ratings Health: 1
 Flammability: 0
 Instability: 1

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