



**HCS CLASS:** Oxidizer.  
Highly toxic-Crystalline Silica.

**HCS Risk Phrases**

**Protective Clothing**



**Section I. Chemical Product and Company Identification**

Common Name/ Trade Name	<b>EnCap-HP Delayed Release Breaker</b>	Revision Date: December 6, 2011
Supplier	FRITZ INDUSTRIES, INC. 500 SAM HOUSTON ROAD MESQUITE, TX 75149 (972) 285-5471 (800) 955-1323	In Case of Emergency. (800) 424-9300 Week Days: (972) 285-5471 (800) 955-1323
Chemical Family	Persulfate salt (oxidizing agent)	
Material Uses	Delayed Release Oil well Additive	

**Section II. Composition and Information on Ingredients**

Name	CAS #	% by Weight	Exposure Limits	LC <sub>50</sub> /LD <sub>50</sub> ORAL(LD50)
Ammonium persulfate	7727-54-0	>60	ACGIH: 0.1 mg/m <sup>3</sup> TWA	Acute 820 mg/kg (Rat).
Cured acrylic resin	Not available	>25	Not available	Not available
Silica, Crystalline- Quartz	14808-60-7	< 16	ACGIH: 0.025 mg/m <sup>3</sup> TWA OSHA: 0.1 mg/m <sup>3</sup> TWA NIOSH: 0.05 mg/m <sup>3</sup> TWA	Acute 3,160 mg/kg (Rat).

**Section III. Hazards Identification**

**Emergency overview** Oxidizer. Avoid breathing dust. Dust may be harmful and irritating. Ammonium persulfate has low dermal toxicity and is moderate toxic when ingested. Product is minimally irritating to the eyes and non-irritating to the skin. Moderate toxicity if swallowed. If airborne exposure is excessive, wear NIOSH/MSHA approved respirator. This product contains crystalline silica that may cause silicosis and cancer.

**Eye contact** Minimally irritating to the eyes.

**Skin** Non-irritating to the skin, but may cause skin sensitization, and allergic reaction, upon repeated exposure which becomes evident upon re-exposure

**Inhalation** May cause respiratory tract irritation. Inhalation may be fatal as a result of spasm, inflammation, edema of the respiratory tract.

**ingestion** May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May be harmful if swallowed.

**Chronic exposure** Repeated or prolonged exposure may cause allergic reaction to sensitive individual. Allergy may develop with repeated exposures.

**Notes to Physician** Treat symptomatically and supportively

**Section IV. First Aid Measures**

**Eye Contact** Do not rub eyes. IMMEDIATELY flush eyes with running water for at least 15 minutes, keeping eyelids open. COLD water may be used. DO NOT use an eye ointment. Seek medical attention if irritation develops and persists.

**Skin Contact** If the chemical got onto the clothed portion of the body, remove the contaminated clothes, and shower. If the chemical touches exposed skin, such as the hands: Gently and thoroughly wash contaminated skin with running water and non-abrasive soap. COLD water may be used. If irritation develops and persists, seek medical attention.

**Inhalation** Immediately go to a well-ventilated area and rest. Seek immediate medical attention. If breathing is difficult, give oxygen. If not breathing give artificial respiration.

**Ingestion** Remove material from mouth and rinse with water if the victim is conscious and alert. If the material is swallowed, do not induce vomiting. If victim is conscious and alert, give 2 to 4 cupfuls of water. Seek immediate medical attention.

**Section V. Fire and Explosion Data**

Flammability of the Product	This material is not considered flammable or combustible.
Explosion Hazards in Presence of Various Substances	Oxidizer: Decomposes in storage under conditions of excessive heat and/or moisture causing release of oxides of nitrogen, sulfur and oxygen that supports combustion.
Fire Fighting Media and Instructions	Deluge with water. Do not use carbon dioxide or other gas-filled fire extinguishers, as they will have no effect on decomposing persulfates. In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece.

**Section VI. Accidental Release Measures**

Leak/Spill	Ventilate area of leak or spill. Clean-up personnel require goggles and MSHA/NIOSH respiratory protection for dust and organic vapors. Pick-up spill in a manner which does not create dust and place in a suitable container for reclamation or disposal in a method that does not generate dust.
Disposal	Whatever can not be saved for reclamation may be disposed by following local, state and federal regulations.

**Section VII. Handling and Storage**

Handling	Store in a cool dry place, keep away from heat. Keep away from sources of ignition. Keep away from combustible materials. Avoid breakage of the material. DO NOT breathe dust. In case of insufficient ventilation, wear suitable respiratory equipment. If you feel unwell, seek medical attention and show the label when possible. Avoid contact with skin and eyes. Keep away from incompatibles such as reducing agents, organic materials, metals, moisture.
Storage	Oxidizing materials should be stored in a separate safety storage cabinet or room. Keep in a tightly closed container, in a cool (less than 85 °F), dry and ventilated area. Keep product out of direct sunlight. Product has a shelf life of twelve (12) months. Use a first in – first out storage system.

**Section VIII. Exposure Controls/Personal Protection**

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 Protection	Splash goggles. Dust mask or respirator are not necessary in areas with adequate ventilation. Be sure to use a MSHA/NIOSH approved respirator when ventilation is inadequate.
Personal Protection in Case of a Large Spill	A self-contained breathing apparatus should be used to avoid inhalation of the product.

**Section IX. Physical and Chemical Properties**

Physical state and Appearance	solid granules	odor: slightly acrid color: off white
Specific gravity (H <sub>2</sub> O=1)	1.723	
pH (1% slurry in water)	4.5 -5.5	
Solubility	partially soluble	

**Section X. Stability and Reactivity Data**

Stability	The product is stable under ordinary conditions of use and storage. This product becomes unstable in the presence of moisture and reducing agents.
Incompatibility with various substances	Highly reactive with reducing agents and organic materials. Reactive with metals and moisture. Slightly reactive with acids and alkalis.
Corrosivity	Slightly corrosive in presence of steel. Very slightly corrosive in presence of aluminum, of zinc, and of copper.
Special Remarks on Reactivity	Hazardous decomposition products: Oxides of sulfur, sulfuric and ammonia, phosphines, oxides of nitrogen, oxygen which may support combustion and ozone.

**Section XI. Toxicological Information**

Routes of Entry	Eye contact. Skin Contact. Inhalation. Ingestion.
Target Organs	Sensory irritation – eyes, nose, throat and lungs
Toxic Effects on Humans	Dust may be harmful and irritating. Ammonium persulfate has low dermal toxicity [LD <sub>50</sub> (rabbit) > 2,000 mg/kg] and is moderate toxic when ingested [LD <sub>50</sub> (rat) > 700 mg/kg, female rat]. Product is minimally irritating to the eyes and non-irritating to the skin.
Special Remarks on other Toxic Effects on Humans	Crystalline silica (quartz) inhaled from occupational sources is classified as carcinogenic to Irritant in case of skin contact and ingestion.

**Section XII. Ecological Information**

The following data is for ammonium persulfate:

Species	Time (hr)	LC50 (mg/L)
Bluegill sunfish	96	103
Rainbow trout	96	76.3
Daphnia	48	120
Grass shrimp	96	391

**Section XIII. Disposal Considerations**

Waste Disposal                      Whatever can not be saved for reclamation may be disposed by following local, state and federal regulations.

**Section XIV. Transport Information**

DOT Classification                      5.1  
 Proper Shipping Name                  Ammonium Persulfate  
 DOT Identification Number              UN1444  
 Packing group                              III  
 DOT (Pictograms required)

**Section XV. Regulatory Information and Pictograms**

## US Regulations

TSCA Inventory Status (40 CFR 710)	All components listed on inventory
SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)	
SECTION 302 Extremely Hazardous Substances (40 CFR 355, Appendix a)	Not listed
SECTION 311 HAZARD CATEGORIES (40 CFR 370)	Acute health hazard, Chronic health hazard, Fire hazard, Reactive Hazard
SECTION 312 THRESHOLD PLANNING QUANTITY (40 CFR 370)	
SECTION 313 REPORTABLE INGREDIENTS (40 CFR 372)	Not listed
CERLA/Superfund Reportable Spill Quantity	Not applicable
RCRA Hazardous Waste Classification	If this product becomes a waste, it does meet the criteria of a hazardous waste as defined by the US EPA. (Reactivity D003)

## Canadian Regulation

WHMIS	Class C: Oxidizing material Class D-2A: Material causing other toxic effects (crystalline silica)
Ingredients Disclosure List	Listed

## International Regulation

## Chemical Inventory Listings

Australia (AICS)	Listed
China	Listed
Japan (ENCS)	(1)-406
Korea	KE-09815
Philippines (PICCS)	Listed

EC Symbols	O (Oxidizer) Xn (Harmful) Xi (Irritant)
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EC Risk Phases	R8- Contact with combustible material may cause fire. R9- Explosive when mixed with combustible material. R22- Harmful if ingested. R26/28- Very toxic by inhalation-crystalline silica. R36- Irritating to eyes.
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**Section XV. Regulatory Information and Pictograms (cont'd)**

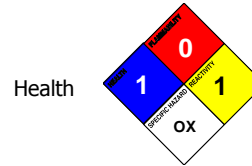
EC Safety Phrases  
 S2- Keep out of the reach of children.  
 S22- Do not breathe dust.  
 S24- Avoid contact with skin.  
 S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice  
 S37- Wear suitable gloves.

Pictograms

HMIS (U.S.A.)



National Fire Protection Association (U.S.A.)



Fire Hazard

Reactivity

Specific Hazard

WHMIS (Canada)



TDG (Canada)



**Section XVI. Other Information**

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