

Consolidated Oil Well Services, Inc.
P.O. Box 884
Chanute, KS 66720

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identifier : GB-121
Chemical Name : Persulfate Salt
Chemical Family : Persulfate Salt (Oxidizing Agent)
Manufacturer : CESI Chemical (a Flotek Industries, Inc. company)
: 1004 S. Plainsman Road, Marlow, OK 73055
Emergency Phone : (405) 282-8510
Prepared by : Denise Patterson
Phone : (580) 658-6608
Issue Date : 09/09/2005
Revised Date : 08/10/2010

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient : Ammonium Persulfate
CAS No. : 7727-54-0
Wt. Percent Range : 50-100
OSHA PEL : No data available
ACGIH TLV : 2 mg/m³
LD50 : Oral Acute: 820 mg/kg (rat)
LC50 : No data available

Ingredient : Silica, Crystalline-Quartz
CAS No. : 14808-60-7
Wt. Percent Range : 1-15
OSHA PEL : 0.1 mg/m³
ACGIH TLV : 0.1 mg/m³
LD50 : Oral Acute: 3160 mg/kg (rat)
LC50 : No data available

3. HAZARDS IDENTIFICATION

Human health hazards
Acute health hazards : Eye and skin irritant
Chronic health hazards : Allergies
Route(s) of entry : Eyes, skin and inhalation
Safety hazards : Oxidizer
Environmental hazards : No information is available on the product.

4. FIRST AID MEASURES

Eye : Remove contact lenses at once. Immediately flush with copious amounts of water for at least 15 minutes while holding eyelids open. If irritation persists, seek medical attention.
Skin : Wash affected area thoroughly with soap and water for at least 15 minutes or until product is removed. Remove contaminated clothing and launder before reuse. If irritation develops, seek medical attention.
Inhalation : Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek prompt medical attention.
Ingestion : Call a physician or poison control center immediately. Only induce vomiting at the instruction of medical personnel. Never give anything by mouth to an unconscious person.

5. FIRE FIGHTING MEASURES

Flash Point	:	Not Applicable
Lower Explosion Limit	:	Not Applicable
Upper Explosion limit	:	Not Applicable
Extinguishing Media	:	Deluge with water. Do not use carbon dioxide or other gas-filled fire extinguishers, as they will have no effect on decomposing persulfates.
Protective equipment	:	NIOSH/MSHA approved self-contained breathing apparatus (SCBA) and turnout gear.
Hazardous combustion products	:	Oxides of nitrogen, carbon and sulfur

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	:	Wear hand, eye, protective clothing and respiratory protective equipment to eliminate contact.
General precautions	:	Eliminate ignition sources. Evacuate all non-essential personnel.
Small spills	:	Same as for large spills.
Large spills	:	Sweep up and scoop into containers for reuse or disposal. Avoid producing dust. Avoid entry of large amounts of product into sewers, natural waters and drinking water. Follow all local, state and federal regulations regarding the disposal of this material.

7. HANDLING AND STORAGE

Handling	:	Avoid contact with eyes, skin and clothing. Avoid breathing dust. Use with adequate ventilation. Do not take internally. Wear appropriate protective clothing and equipment during handling. Wash thoroughly after handling. Remove contaminated clothing and launder before reuse.
Storage	:	Store in a cool, dry place. Keep away from heat, sources of ignition and combustible materials. Oxidizing materials should be stored in a separate storage cabinet or room. Keep in a tightly closed container.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure standards	:	Not established for the product.
Hand protection	:	Nitrile rubber gloves.
Eye protection	:	Safety goggles
Respiratory protection	:	Dust mask or appropriate respiratory protection equipment.
Engineering control measures	:	General (mechanical) room ventilation is expected to be satisfactory.
Other	:	Emergency eye wash fountains and safety showers should be in the immediate vicinity of any potential exposure.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	:	Solid
Appearance	:	Granules
Color	:	Off-white
Odor	:	Slightly acrid
Specific Gravity	:	1.723
Bulk Density	:	No data available
Boiling Point	:	Not applicable
Freezing Point	:	Not applicable
Solubility in water	:	Partially soluble
pH	:	4.5-5.5 (1% slurry in water)
Percent Volatiles	:	Not applicable
Vapor Pressure	:	Not applicable

10. STABILITY AND REACTIVITY

Stability	:	Stable
Conditions to avoid	:	Moisture and reducing agents
Hazardous polymerization	:	Will not occur
Hazardous decomposition products	:	Oxides of nitrogen, carbon and sulfur
Incompatibility	:	Highly reactive with reducing agents and organic materials. Reactive with metals and moisture. Slightly reactive with acids and alkalis.

11. TOXICOLOGICAL INFORMATION

Acute Effects	
Eye	: Cause eye irritation.
Skin	: Causes skin irritation. May cause skin sensitization, ad allergic reaction, upon repeated exposure which becomes evident upon re-exposure.
Inhalation	: Cause respiratory tract irritation. Inhalation may be fatal as a result of spasm, inflammation, edema of the respiratory tract.
Ingestion	: Causes faastrointestinal irritation with nausea, vomiting and diarrhea. May be harmful if swallowed.
Chronic Effects	: Repeated for prolonged exposure may cause allergic reaction to sensitive individual. Allergy may develop with repeated exposures.
Carcinogenicity	: None of the ingredients are listed in NTP, IARC monographs or OSHA regulated.

12. ECOLOGICAL INFORMATION

Environmental Fate	: Biodegradability does not apply to inorganic substances.
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13. DISPOSAL CONSIDERATIONS

Waste disposal	: Recycle if possible. Otherwise dispose to licensed disposal contractor.
Product disposal	: Recycle if possible. Otherwise comply with all local, state and federal regulations.
Container disposal	: Comply with all local, state and federal regulations.

14. TRANSPORT INFORMATION

LAND (D.O.T.)

Shipping Name	: UN1444, Ammonium Persulfate, 5.1, PG III
Label(s) required	: Oxidizer
Emergency Phone	: (405) 282-8510

AIR (IATA)

Shipping Name	: UN1444, Ammonium Persulfate, 5.1, PG III
Label(s) required	: Oxidizer

SEA (IMDG)

Shipping Name	: UN1444, Ammonium Persulfate, 5.1, PG III
Label(s) required	: Oxidizer

15. REGULATORY INFORMATION

	This document has been prepared in accordance with the MSDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.
OSHA Classification	: Oxidizer
TSCA (USA)	: All components listed.
DSL (Canada)	: All components listed.
SARA Title III Section 302	: Extremely Hazardous Substances (40CFR355): This product does not contain ingredients listed in Appendix A and B.
Sections 311/312	
Immediate (acute) health hazard	: YES
Delayed (chronic) health hazard	: YES
Fire hazard	: NO
Sudden Release of Pressure Hazard	: NO
Reactive Hazard	: NO
Section 313 Reportable Quantities	: None

CERCLA If the reportable quantity of this product is accidentally spilled, the incident is subject to the provisions of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and must be reported to the National Response Center by calling (800) 424-8802.

Reportable Quantity : Not determined for the product.

16. OTHER INFORMATION

NFPA 704
Health : 1
Fire : 0
Reactivity : 1
Special : None

HMIS
Health : 1
Fire : 0
Reactivity : 1
Special : None

Disclaimer of Liability : The information contained in this MSDS was obtained from sources that we believe are reliable. However, the information is without any warranty, express or implied, regarding correctness. The methods of handling, storage, use and disposal of the product are beyond our control and may be outside the scope of our knowledge. For these reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.