

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

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identifier : Buffer CL
Chemical Name : Not Applicable, A Blend
Chemical Family : Not Applicable, A Blend
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 : 01/30/1995
Revised Date : 01/11/2011

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient : Potassium Hydroxide
CAS No. : 1310-58-3
Wt. Percent Range : 25-50
OSHA PEL : 2 mg/m³
ACGIH TLV : 2 mg/m³
LD50 : Acute Oral 365 mg/kg (rat)
LC50 : No data available

3. HAZARDS IDENTIFICATION

Human health hazards
Acute health hazards : Irritant
Chronic health hazards : Dermatitis of the skin
Route(s) of entry : Eyes, skin, inhalation and ingestion
Safety hazards : None known
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 :
Protective equipment : NIOSH/MSHA approved self-contained breathing apparatus (SCBA) and turnout gear.
Hazardous combustion products : None known

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 : Soak up residue with an inert absorbent and place into appropriate containers for disposal or reclamation. Flush contaminated area thoroughly with water. Retain washings as contaminated waste.
- Large spills : If possible stop the flow of chemical. Dike to contain and prevent spreading. Remove with vacuum truck or pump to salvage vessels. Treat residue as for small spills.

7. HANDLING AND STORAGE

- Handling : Avoid contact with eyes, skin and clothing. Avoid breathing vapors. Use with adequate ventilation. Do not take internally. Wear appropriate protective clothing and equipment during handling. Wash thoroughly after handling. Remove contaminated clothing and laundry before reuse.
- Storage : Keep container closed when not in use. Store drums with the bung up. Carefully vent container before removing bung.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- Occupational exposure standards : Not established for the product.
- Hand protection : Nitrile rubber gloves.
- Eye protection : Chemical splash goggles and face shield if conditions warrant.
- Respiratory protection : Not normally required.
- 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 : Liquid
- Appearance : Clear
- Color : Colorless
- Odor : Mild
- Specific Gravity : 1.51
- Bulk Density : 12.6 lbs/gal
- Boiling Point : No data available
- Freezing Point : >-40^o F (>-40^oC)
- Solubility in water : Complete
- pH : ~14
- Percent Volatiles : Not applicable
- Vapor Pressure : Not applicable

10. STABILITY AND REACTIVITY

- Stability : Stable
- Conditions to avoid : Water
- Hazardous polymerization : Will not occur
- Hazardous decomposition products : None known
- Incompatibility : Strong acids, lime dust, aluminium, tin and zinc

11. TOXICOLOGICAL INFORMATION

- Acute Effects
- Eye : Causes moderate to severe irritation. If not removed promptly, permanent injury may result.
- Skin : May cause mild to moderate irritation with brief contact. Prolonged contact may cause severe irritation, drying, defatting and dermatitis.
- Inhalation : May cause nose, throat and general upper respiratory tract irritation, coughing and headache.
- Ingestion : Product is harmful if swallowed. May cause severe irritation to the mucous membranes of the mouth, throat, esophagus and stomach.
- Chronic Effects : No other known chronic effects.
- Carcinogenicity : None of the ingredients are listed in NTP, IARC monographs or OSHA regulated.

12. ECOLOGICAL INFORMATION

Environmental Fate : No information is available on the product.

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 : Drain container thoroughly. Triple rinse with water. Send to reclaimer or dispose of properly. Comply with all local, state and federal regulations.

14. TRANSPORT INFORMATION

LAND (D.O.T.)

Shipping Name : UN1760, Corrosive liquids, n.o.s., (contains Potassium Hydroxide), 8, PG II
Label(s) required : Corrosive
Emergency Phone : (405) 282-8510

AIR (IATA)

Shipping Name : UN1760, Corrosive liquids, n.o.s., (contains Potassium Hydroxide), 8, PG II
Label(s) required : Corrosive

SEA (IMDG)

Shipping Name : UN1760, Corrosive liquids, n.o.s., (contains Potassium Hydroxide), 8, PG II
Label(s) required : Corrosive

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 : Corrosive

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 : Potassium Hydroxide 1,000 lbs

16. OTHER INFORMATION

NFPA 704

Health : 2
Fire : 0
Reactivity : 0
Special : None

HMIS

Health : 2
Fire : 0
Reactivity : 0
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.