

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

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identifier : ICR-200
Chemical Name : Not Applicable, A Blend
Chemical Family : Mercaptan and Copper Salt
Manufacturer : CESI Chemical (a Flotek Industries, Inc. company)
: 1004 S. Plainsman Road, Marlow, OK 73055
Emergency Phone : (405) 282-8510
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2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient : 2-Mercaptoethanol
CAS No. : 60-24-2
Wt. Percent Range : 60-90
OSHA PEL : Not established
ACGIH TLV : Not established
LD50 : Oral>244mg/kg (rat), 190mg/kg (mouse); Dermal>150mg/kg (rabbit);
Inhalation>300mg/kg (guinea pig); 13,200mg/m³/2hr(mouse)
LC50 : No data available

Ingredient : Cupric Chloride
CAS No. : 7447-39-4
Wt. Percent Range : 1-10
OSHA PEL : TWA 1.0 mg (Cu)/m³
ACGIH TLV : TWA 0.1 (Cu)/m³
LD50 : No data available
LC50 : No data available

Ingredient : Monoethanolamine
CAS No. : 141-43-5
Wt. Percent Range : Proprietary
OSHA PEL : No data available
ACGIH TLV : 3 ppm
LD50 : No data available
LC50 : No data available

3. HAZARDS IDENTIFICATION

Human health hazards
Acute health hazards : Eye, skin and inhalation irritant. May be harmful if swallowed.
Chronic health hazards : Liver, Kidneys, Blood &/or blood forming organs, Lungs, Respiratory systems,
Eyes & Skin
Route(s) of entry : Eyes, skin, inhalation, ingestion
Safety hazards : Toxic liquid
Environmental hazards : Toxic to aquatic organisms; Cupric Chloride is a severe marine pollutant per
49 CFR 172.11, Appendix B

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. 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	: 150 ⁰ F (65.6 ⁰ C) (Closed Cup)
Lower Explosion Limit	: No data available
Upper Explosion limit	: No data available
Extinguishing Media	: carbon dioxide, water spray, foam or dry chemical
Protective equipment	: NIOSH/MSHA approved self-contained breathing apparatus (SCBA) and turnout gear.
Hazardous combustion products	: Irritating and highly toxic gases

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 launder before reuse.
Storage	: Store away from heat, sparks and open flames. Keep container tightly closed when not in use. Store drums with the bung up. Carefully vent container before removing bung. PRECAUTIONARY LABEL INFORMATION: COMBUSTIBLE!! May be fatal if absorbed through skin. Causes eye and skin irritation. Provide adequate ventilation.

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	: If exposure may or does exceed exposure limits, use a MIOSH/MSHA approved atmosphere-supplying respirator or an air-purifying respirator for organic vapors.
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	: Light yellow
Odor	: Mercaptan
Specific Gravity	: 1.1476
Bulk Density	: 9.58 lbs/gal
Boiling Point	: No data available
Freezing Point	: <0 ⁰ F (<-17.8 ⁰ C)
Solubility in water	: 100%
pH	: 8.62 (10% solution in DI Water)
Percent Volatiles	: 60-90% weight
Vapor Pressure	: Not determined

10. STABILITY AND REACTIVITY

Stability	: Stable
Conditions to avoid	: High Temperatures
Hazardous polymerization	: Will not occur
Hazardous decomposition products	: Smoke, soot and toxic/irritating fumes (i.e., carbon dioxide, carbon monoxide, etc.), oxides of sulfur and hydrogen sulfide.
Incompatibility	: Oxidizers, Reducers, Acids and Strong Bases

11. TOXICOLOGICAL INFORMATION

Acute Effects	
Eye	: Causes severe irritation. Can cause burning sensation, tearing and redness.
Skin	: Causes severe irritation. May be harmful if absorbed through the skin.
Inhalation	: Irritating to eyes, nose and respiratory tract. Can cause dizziness, headaches and incoordination. Stomach upset can occur.
Ingestion	: Severely irritating to the mouth, throat and stomach. May cause nausea, vomiting, pain and stomach upset (e.g., diarrhea)
Chronic Effects	: Liver, Kidneys, Blood and/or blood-forming organs, Lungs, Respiratory System, Eyes and Skin.
Carcinogenicity	: None of the ingredients are listed in NTP, IARC monographs or OSHA regulated.

12. ECOLOGICAL INFORMATION

Environmental Fate	: Product is expected to be readily biodegradable.
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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	: 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	: UN2810, Toxic liquids, organic, n.o.s., (contains 2-Mercaptoethanol), 6.1, PG II
Label(s) required	: Toxic
Emergency Phone	: (405) 282-8510

AIR (IATA)

Shipping Name	: UN2810, Toxic liquids, organic, n.o.s., (contains 2-Mercaptoethanol), 6.1, PG II
Label(s) required	: Toxic

SEA (IMDG)

Shipping Name	: UN2810, Toxic liquids, organic, n.o.s., (contains 2-Mercaptoethanol), 6.1, PG II
Label(s) required	: Toxic

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	: Toxic
TSCA (USA)	: All components listed.
DSL (Canada)	: All components listed.
SARA Title III Section 302	: Extremely Hazardous Substances (40CFR355): This product contains ingredients listed in Appendix A and B.
Other	: Cupric Chloride is a severe marine pollutant per 49 CFR 172.101, Appendix B

Sections 311/312
 Immediate (acute) health hazard : YES
 Delayed (chronic) health hazard : YES
 Fire hazard : YES
 Sudden Release of Pressure Hazard : NO
 Reactive Hazard : NO

 Section 313 Reportable Quantities : YES
 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 : Cupric Chloride 10lbs

16. OTHER INFORMATION

NFPA 704
 Health : 3
 Fire : 2
 Reactivity : 0
 Special : None

HMIS
 Health : 3
 Fire : 2
 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.