

MATERIAL SAFETY DATA SHEET

Product Trade Name: **Cat-AQL-LT**

Revision Date: 12-Feb-2013

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Trade Name: Cat-AQL-LT
Synonyms: None
Chemical Family: Inorganic acid
Application: Crosslinker

Manufacturer/Supplier: Halliburton Energy Services
P.O. Box 1431
Duncan, Oklahoma 73536-0431
Emergency Telephone: (281) 575-5000

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2. COMPOSITION/INFORMATION ON INGREDIENTS

Substances	CAS Number	PERCENT	ACGIH TLV-TWA	OSHA PEL-TWA
Ferric chloride	7705-08-0	30 - 60%	1 mg/m ³	1 mg/m ³

3. HAZARDS IDENTIFICATION

Hazard Overview May be fatal if swallowed. May cause eye, skin, and respiratory burns. May cause damage to internal organs.

4. FIRST AID MEASURES

Inhalation If inhaled, remove to fresh air. If not breathing give artificial respiration, preferably mouth-to-mouth. If breathing is difficult give oxygen. Get medical attention.

Skin In case of contact, immediately flush skin with plenty of soap and water for at least 15 minutes. Get medical attention. Remove contaminated clothing and launder before reuse.

Eyes In case of contact, or suspected contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention immediately after flushing.

Ingestion Do not induce vomiting. Slowly dilute with 1-2 glasses of water or milk and seek medical attention. Never give anything by mouth to an unconscious person.

Notes to Physician If ingested, a stomach wash followed by saline catharsis and cenodyne is recommended.

5. FIRE FIGHTING MEASURES

Flash Point/Range (F):	Not Determined
Flash Point/Range (C):	Not Determined
Flash Point Method:	Not Determined
Autoignition Temperature (F):	Not Determined
Autoignition Temperature (C):	Not Determined
Flammability Limits in Air - Lower (%):	Not Determined
Flammability Limits in Air - Upper (%):	Not Determined

Fire Extinguishing Media	All standard firefighting media.
Special Exposure Hazards	Decomposition in fire may produce toxic gases. Use water spray to cool fire exposed surfaces.
Special Protective Equipment for Fire-Fighters	Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.
NFPA Ratings:	Health 2, Flammability 0, Reactivity 0
HMS Ratings:	Health 2, Flammability 0, Reactivity 0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautionary Measures	Use appropriate protective equipment.
Environmental Precautionary Measures	Prevent from entering sewers, waterways, or low areas.
Procedure for Cleaning / Absorption	Isolate spill and stop leak where safe. Contain spill with sand or other inert materials. Neutralize to pH of 6-8. Scoop up and remove.

7. HANDLING AND STORAGE

Handling Precautions	Wash hands after use. Launder contaminated clothing before reuse. Avoid contact with eyes, skin, or clothing. Avoid breathing vapors.
Storage Information	Store away from alkalis. Store away from oxidizers. Store in a cool, dry location. Keep from excessive heat. Product has a shelf life of 24 months.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls	A well ventilated area to control dust levels.
Respiratory Protection	Acid gas respirator with a dust/mist filter.
Hand Protection	Impervious rubber gloves.
Skin Protection	Rubber boots. Rubber apron.
Eye Protection	Chemical goggles; also wear a face shield if splashing hazard exists.
Other Precautions	Eyewash fountains and safety showers must be easily accessible.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
Color:	Red brown
Odor:	Mild acidic
pH:	< 1

9. PHYSICAL AND CHEMICAL PROPERTIES

Specific Gravity @ 20 C (Water=1):	1.43
Density @ 20 C (lbs./gallon):	11.91
Bulk Density @ 20 C (lbs/ft3):	Not Determined
Boiling Point/Range (F):	230
Boiling Point/Range (C):	110
Freezing Point/Range (F):	Not Determined
Freezing Point/Range (C):	Not Determined
Vapor Pressure @ 20 C (mmHg):	Not Determined
Vapor Density (Air=1):	Not Determined
Percent Volatiles:	60
Evaporation Rate (Butyl Acetate=1):	> 1
Solubility in Water (g/100ml):	Soluble
Solubility in Solvents (g/100ml):	Not Determined
VOCs (lbs./gallon):	Not Determined
Viscosity, Dynamic @ 20 C (centipoise):	Not Determined
Viscosity, Kinematic @ 20 C (centistokes):	Not Determined
Partition Coefficient/n-Octanol/Water:	Not Determined
Molecular Weight (g/mole):	Not Determined

10. STABILITY AND REACTIVITY

Stability Data:	Stable
Hazardous Polymerization:	Will Not Occur
Conditions to Avoid	None known.
Incompatibility (Materials to Avoid)	Strong alkalis. Contact with metals. Concrete.
Hazardous Decomposition Products	Hydrogen chloride.
Additional Guidelines	Not Applicable

11. TOXICOLOGICAL INFORMATION

Principle Route of Exposure	Eye or skin contact, inhalation.
Inhalation	Causes severe respiratory irritation.
Skin Contact	Causes severe skin irritation. May cause skin burns.
Eye Contact	May cause eye burns. May cause permanent eye damage. May cause eye tissue discoloration. Causes severe eye irritation
Ingestion	Causes burns of the mouth, throat and stomach. May be fatal if swallowed. May cause abdominal pain, vomiting, nausea, and diarrhea. May cause liver and kidney damage. May affect the blood and blood system.
Aggravated Medical Conditions	Lung disorders. Skin disorders.
Chronic Effects/Carcinogenicity	Prolonged or repeated exposure may cause liver, kidney and blood effects. Prolonged or repeated exposure may cause lung damage.
Other Information	None known.
Toxicity Tests	
Oral Toxicity:	Not determined

Dermal Toxicity:	Not determined
Inhalation Toxicity:	Not determined
Primary Irritation Effect:	Not determined
Carcinogenicity	Not determined
Genotoxicity:	Not determined
Reproductive / Developmental Toxicity:	Not determined

12. ECOLOGICAL INFORMATION

Mobility (Water/Soil/Air)	Not determined
Persistence/Degradability	Not determined
Bio-accumulation	Not determined

Ecotoxicological Information

Acute Fish Toxicity:	Not determined
Acute Crustaceans Toxicity:	Not determined
Acute Algae Toxicity:	Not determined

Chemical Fate Information	Not determined
Other Information	Not applicable

13. DISPOSAL CONSIDERATIONS

Disposal Method	Disposal should be made in accordance with federal, state, and local regulations.
Contaminated Packaging	Follow all applicable national or local regulations.

14. TRANSPORT INFORMATION

Land Transportation

DOT

UN2582, Ferric Chloride Solution, 8, III
NAERG 154

Canadian TDG

Ferric Chloride Solution, 8, UN2582, III

ADR

UN2582, Ferric Chloride Solution, 8, III

Air Transportation

ICAO/IATA

UN2582,Ferric Chloride Solution, 8, III

Sea Transportation

IMDG

UN2582,Ferric Chloride Solution, 8, III
EmS F-A, S-B

Other Transportation Information

Labels: Corrosive

15. REGULATORY INFORMATION

US Regulations

US TSCA Inventory All components listed on inventory or are exempt.

EPA SARA Title III Extremely Hazardous Substances Not applicable

EPA SARA (311,312) Hazard Class Acute Health Hazard
Chronic Health Hazard

EPA SARA (313) Chemicals This product does not contain a toxic chemical for routine annual "Toxic Chemical Release Reporting" under Section 313 (40 CFR 372).

EPA CERCLA/Superfund Reportable Spill Quantity EPA Reportable Spill Quantity is 210 Gallons based on Ferric chloride (CAS: 7705-08-0).

EPA RCRA Hazardous Waste Classification Corrosivity D002
If product becomes a waste, it does meet the criteria of a hazardous waste as defined by the US EPA, because of:

California Proposition 65 All components listed do not apply to the California Proposition 65 Regulation.

MA Right-to-Know Law One or more components listed.

NJ Right-to-Know Law One or more components listed.

PA Right-to-Know Law One or more components listed.

Canadian Regulations

Canadian DSL Inventory All components listed on inventory or are exempt.

WHMIS Hazard Class E Corrosive Material
D2B Toxic Materials

16. OTHER INFORMATION

The following sections have been revised since the last issue of this MSDS
Not applicable

Additional Information

For additional information on the use of this product, contact your local Halliburton representative.

For questions about the Safety Data Sheet for this or other Halliburton products, contact Chemical Compliance at 1-580-251-4335.

Disclaimer Statement

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*****END OF MSDS*****