HALLIBURTON

MATERIAL SAFETY DATA SHEET

Product Trade Name: **Corrosion Inhibitor No. 2**

Revision Date: 03-Jan-2013

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Trade Name: Corrosion Inhibitor No. 2
Synonyms: None
Chemical Family: Blend
Application: Corrosion Inhibitor

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

Prepared By
Chemical Compliance
Telephone: 1-580-251-4335
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2. COMPOSITION/INFORMATION ON INGREDIENTS

Substances	CAS Number	PERCENT	ACGIH TLV-TWA	OSHA PEL-TWA
Dipropylene glycol monomethyl ether	34590-94-8	10 - 30%	100 ppm (S)	100 ppm (S)
Propargyl alcohol	107-19-7	5 - 10%	1 ppm S	Not applicable
Hexamethylenetetramine	100-97-0	1 - 5%	Not applicable	Not applicable

3. HAZARDS IDENTIFICATION

Hazard Overview
May cause allergic skin and respiratory reaction. May cause eye, skin, and respiratory burns. May cause headache, dizziness, and other central nervous system effects. May be absorbed through the skin. May be harmful if swallowed. Flammable.

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. Remove contaminated shoes and discard.

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
Probable mucosal damage may contraindicate the use of gastric lavage.

5. FIRE FIGHTING MEASURES

Flash Point/Range (F):	100
Flash Point/Range (C):	37
Flash Point Method:	TCC
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 Water fog, carbon dioxide, foam, dry chemical.

Special Exposure Hazards Use water spray to cool fire exposed surfaces. Closed containers may explode in fire. Fight fire from a safe distance and from a protected location. Avoid spraying water directly into storage containers due to danger of boilover.

Special Protective Equipment for Fire-Fighters Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.

NFPA Ratings: Health 4, Flammability 3, Reactivity 0
HMIS Ratings: Health 4, Flammability 3, Reactivity 0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautionary Measures Use only competent persons for cleanup. 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. Remove ignition sources and work with non-sparking tools. Contain spill with sand or other inert materials. Scoop up and remove.

7. HANDLING AND STORAGE

Handling Precautions Avoid contact with eyes, skin, or clothing. Avoid breathing vapors. Do NOT consume food, drink, or tobacco in contaminated areas. Wash hands after use. Launder contaminated clothing before reuse. Ground and bond containers when transferring from one container to another.

Storage Information Store away from oxidizers. Keep from heat, sparks, and open flames. Keep container closed when not in use. Product has a shelf life of 24 months.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls Use in a well ventilated area. Local exhaust ventilation should be used in areas without good cross ventilation.

Respiratory Protection Organic vapor/acid gas respirator. In high concentrations, supplied air respirator or a self-contained breathing apparatus.

Hand Protection Impervious rubber gloves.

Skin Protection Full protective chemical resistant clothing. Rubber boots.

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:	Clear amber
Odor:	Acetylenic
pH:	7.2
Specific Gravity @ 20 C (Water=1):	1.027
Density @ 20 C (lbs./gallon):	8.55
Bulk Density @ 20 C (lbs/ft3):	Not Determined
Boiling Point/Range (F):	Not Determined
Boiling Point/Range (C):	Not Determined
Freezing Point/Range (F):	10
Freezing Point/Range (C):	-12
Vapor Pressure @ 20 C (mmHg):	Not Determined
Vapor Density (Air=1):	Not Determined
Percent Volatiles:	Not Determined
Evaporation Rate (Butyl Acetate=1):	Not Determined
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)	Avoid contact with acidic, basic or oxidizing agents.
Hazardous Decomposition Products	Oxides of sulfur. Carbon monoxide and carbon dioxide.
Additional Guidelines	Not Applicable

11. TOXICOLOGICAL INFORMATION

Principle Route of Exposure	Eye or skin contact, inhalation.
Inhalation	Causes severe respiratory burns. May cause central nervous system depression including headache, dizziness, drowsiness, incoordination, slowed reaction time, slurred speech, giddiness and unconsciousness. May cause chemical pneumonia. May cause lungs to fill with fluids. May cause allergic respiratory reaction.
Skin Contact	May be absorbed through the skin and produce effects similar to those caused by inhalation and/or ingestion. Causes severe burns. May cause an allergic skin reaction.
Eye Contact	Causes severe eye burns.

Ingestion Causes burns of the mouth, throat and stomach. May cause central nervous system depression including headache, dizziness, drowsiness, muscular weakness, incoordination, slowed reaction time, fatigue blurred vision, slurred speech, giddiness, tremors and convulsions.

Aggravated Medical Conditions Skin disorders.

Chronic Effects/Carcinogenicity Prolonged or repeated exposure may cause liver, kidney and lung effects.

Other Information None known.

Toxicity Tests

Oral Toxicity: LD50: 20 mg/kg (Rat) - Propargyl Alcohol
LD50: 569 mg/kg (Mouse) - Hexamethylenetetramine
LD50: 5660 mg/kg (Rat) - Dipropylene Glycol Monomethyl Ether

Dermal Toxicity: LD50: 16 mg/kg (Rabbit) - Propargyl Alcohol
LD50: 9500 mg/kg (Rabbit) - Dipropylene Glycol Monomethyl Ether

Inhalation Toxicity: LC50: 873 ppm/2 hr. (Rat) - Propargyl Alcohol

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

UN1993,Flammable Liquid, N.O.S.(Contains Propargyl Alcohol), 3, III, (37.8 C)
NAERG 128

Canadian TDG
Flammable Liquid, N.O.S.(Contains Propargyl Alcohol), 3, UN1993, III, (37.8 C)

ADR

UN1993,Flammable Liquid, N.O.S.(Contains Propargyl Alcohol), 3, III

Air Transportation

ICAO/IATA

UN1993,Flammable Liquid, N.O.S., 3, III
(Contains Propargyl Alcohol)

Sea Transportation

IMDG

UN1993,Flammable Liquid, N.O.S.(Contains Propargyl Alcohol), 3, III, (37.8 C)
EmS F-E, S-E

Other Transportation Information

Labels: Flammable Liquid

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	Fire Hazard Acute Health Hazard Chronic Health Hazard
EPA SARA (313) Chemicals	This product contains toxic chemical(s) listed below which is(are) subject to the reporting requirements of Section 313 of Title III of SARA and 40 CFR Part 372: Propargyl Alcohol//107-19-7 Glycol Ethers//100-97-0
EPA CERCLA/Superfund Reportable Spill Quantity	EPA Reportable Spill Quantity is 1205 Gallons based on Propargyl alcohol (CAS: 107-19-7).
EPA RCRA Hazardous Waste Classification	If product becomes a waste, it does meet the criteria of a hazardous waste as defined by the US EPA, because of: Ignitability D001

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	B2 Flammable Liquids E Corrosive Material D1B 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 Material 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*****