

MATERIAL SAFETY DATA SHEET

Product Trade Name: HAI-82

Revision Date: 21-Dec-2012

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Trade Name: HAI-82
Synonyms: None
Chemical Family: Blend
Application: Corrosion Inhibitor

Manufacturer/Supplier: Halliburton Energy Services, Inc.
 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
Quaternary ammonium salt		5 - 10%	Not applicable	Not applicable
Alcohols, C12-16, ethoxylated	68551-12-2	5 - 10%	Not applicable	Not applicable
Ethoxylated decyl alcohol		5 - 10%	Not applicable	Not applicable
Isopropanol	67-63-0	5 - 10%	200 ppm	400 ppm
Kerosene	8008-20-6	1 - 5%	200 mg/m ³	Not applicable
Hydrotreated light petroleum distillate	64742-47-8	1 - 5%	Not applicable	Not applicable
Light aromatic solvent	64742-95-6	1 - 5%	Not applicable	Not applicable
Naphthalene	91-20-3	0 - 1%	10 ppm (S)	10 ppm
Propargyl alcohol	107-19-7	1 - 5%	1 ppm S	Not applicable
Methanol	67-56-1	10 - 30%	200 ppm (S)	200 ppm

3. HAZARDS IDENTIFICATION

Hazard Overview May cause eye, skin, and respiratory irritation. May cause headache, dizziness, and other central nervous system effects. May be absorbed through the skin. May be fatal if swallowed. May cause blindness. 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.

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	If swallowed, induce vomiting immediately by giving two glasses of water and sticking fingers down throat; never give anything to an unconscious person. Get medical attention.
Notes to Physician	Not Applicable

5. FIRE FIGHTING MEASURES

Flash Point/Range (F):	62
Flash Point/Range (C):	16.7 Max: < -23
Flash Point Method:	PMCC
Autoignition Temperature (F):	Not Determined
Autoignition Temperature (C):	Not Determined
Flammability Limits in Air - Lower (%):	6
Flammability Limits in Air - Upper (%):	36.5

Fire Extinguishing Media Water fog, carbon dioxide, foam, dry chemical.

Special Exposure Hazards May be ignited by heat, sparks or flames. Use water spray to cool fire exposed surfaces. Closed containers may explode in fire. Decomposition in fire may produce toxic gases. Vapors are heavier than air and may accumulate in low areas. Vapors may travel along the ground to be ignited at distant locations. Do not allow runoff to enter waterways.

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 3, Reactivity 0
HMIS Ratings: Health 2, Flammability 3, Physical Hazard 0 , PPE: X

6. ACCIDENTAL RELEASE MEASURES

Personal Precautionary Measures Use appropriate protective equipment. Wear self-contained breathing apparatus in enclosed areas.

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 Wash hands after use. Launder contaminated clothing before reuse. Ground and bond containers when transferring from one container to another. Avoid contact with eyes, skin, or clothing. Avoid breathing vapors. Avoid breathing mist.

Storage Information Store away from oxidizers. Store in a cool well ventilated area. 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 Positive pressure self-contained breathing apparatus if methanol is released.

Hand Protection	Impervious rubber gloves.
Skin Protection	Full protective chemical resistant clothing.
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:	Brown
Odor:	Sweet aromatic
pH:	3-5 (10% in 3:1 IPA/DI H2O)
Specific Gravity @ 20 C (Water=1):	0.9179 - 0.9479
Density @ 20 C (lbs./gallon):	7.77
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 Max: < -10
Freezing Point/Range (C):	-23
Vapor Pressure @ 20 C (mmHg):	3.7
Vapor Density (Air=1):	Not Determined
Percent Volatiles:	Not Determined
Evaporation Rate (Butyl Acetate=1):	Not Determined
Solubility in Water (g/100ml):	Insoluble
Solubility in Solvents (g/100ml):	Not Determined
VOCs (lbs./gallon):	Not Determined
Viscosity, Dynamic @ 20 C (centipoise):	5 - 20
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	Keep away from heat, sparks and flame.
Incompatibility (Materials to Avoid)	Strong oxidizers.
Hazardous Decomposition Products	Carbon monoxide and carbon dioxide. Oxides of nitrogen.
Additional Guidelines	Not Applicable

11. TOXICOLOGICAL INFORMATION

Principle Route of Exposure	Eye or skin contact, inhalation.
Inhalation	May cause central nervous system depression including headache, dizziness, drowsiness, incoordination, slowed reaction time, slurred speech, giddiness and unconsciousness. May cause respiratory irritation.
Skin Contact	May cause skin irritation. May be absorbed through the skin and contribute to the symptoms listed under ingestion.

Eye Contact	May cause moderate eye irritation.
Ingestion	May be fatal or cause blindness if swallowed. 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	Eye ailments. Skin disorders.
Chronic Effects/Carcinogenicity	Prolonged or repeated exposure may cause eye, blood, lung, liver, kidney, heart, central nervous system and spleen 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	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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 Methanol, Kerosene), 3, II, (14 C)
NAERG 128

Canadian TDG

Flammable Liquid, N.O.S. (Contains Methanol, Kerosene), 3, UN1993, II, (14 C)

ADR

UN1993, Flammable Liquid, N.O.S. (Contains Methanol, Kerosene), 3, II

Air Transportation

ICAO/IATA

UN1993, Flammable Liquid, N.O.S., 3, II
(Contains Methanol, Kerosene)

Sea Transportation

IMDG

UN1993, Flammable Liquid, N.O.S. (Contains Methanol, Kerosene), 3, II, (14 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	Acute Health Hazard Chronic Health Hazard Fire 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: Methanol//67-56-1 Propargyl Alcohol//107-19-7 Naphthalene//91-20-3
EPA CERCLA/Superfund Reportable Spill Quantity	EPA Reportable Spill Quantity is 2752 Gallons based on Methanol (CAS: 67-56-1).

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	The California Proposition 65 regulations apply to this product.
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	Product contains one or more components not listed on the inventory.
WHMIS Hazard Class	D1B Toxic Materials B2 Flammable Liquids D1A Very 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.
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*****END OF MSDS*****