

MATERIAL SAFETY DATA SHEET

Product Trade Name: **HAI-NS CORROSION INHIBITOR**

Revision Date: 20-Dec-2012

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Trade Name: HAI-NS CORROSION INHIBITOR

Synonyms: None

Chemical Family: Blend

Application: Corrosion Inhibitor

Manufacturer/Supplier Halliburton Energy Services

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Prepared By Chemical Compliance

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2. COMPOSITION/INFORMATION ON INGREDIENTS

Substances	CAS Number	PERCENT	ACGIH TLV-TWA	OSHA PEL-TWA
Pine oil	8002-09-3	1 - 5%	Not applicable	Not applicable
Ethyl octynol	5877-42-9	1 - 5%	Not applicable	Not applicable
Formamide	75-12-7	10 - 30%	10 ppm	Not applicable
Heavy aromatic petroleum naphtha	64742-94-5	1 - 5%	Not applicable	Not applicable
Propargyl alcohol	107-19-7	5 - 10%	1 ppm S	Not applicable
Isopropanol	67-63-0	10 - 30%	200 ppm	400 ppm
Methanol	67-56-1	10 - 30%	200 ppm (S)	200 ppm

3. HAZARDS IDENTIFICATION

Hazard Overview

May cause eye and skin burns. May cause headache, dizziness, and other central nervous system effects. May be fatal if swallowed. May cause blindness. May be absorbed through the skin. May cause allergic skin reaction. May cause birth defects. 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	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	Contains acetylenic alcohols, no known antidote. Treat symptomatically. Probable mucosal damage may contraindicate the use of gastric lavage.

5. FIRE FIGHTING MEASURES

Flash Point/Range (F):	62
Flash Point/Range (C):	16
Flash Point Method:	Not Determined
Autoignition Temperature (F):	Not Determined
Autoignition Temperature (C):	Not Determined
Flammability Limits in Air - Lower (%):	0.8
Flammability Limits in Air - Upper (%):	12
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.
Special Protective Equipment for Fire-Fighters	Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.
NFPA Ratings:	Health 3, Flammability 3, Reactivity 0
HMIS Ratings:	Health 3, Flammability 3, Reactivity 0

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	Avoid contact with eyes, skin, or clothing. Avoid breathing vapors. 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. 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:	Clear dark brown
Odor:	Alcohol
pH:	Not Determined
Specific Gravity @ 20 C (Water=1):	1.01
Density @ 20 C (lbs./gallon):	8.40
Bulk Density @ 20 C (lbs/ft3):	Not Determined
Boiling Point/Range (F):	149
Boiling Point/Range (C):	65
Freezing Point/Range (F):	-80
Freezing Point/Range (C):	-63
Vapor Pressure @ 20 C (mmHg):	91.52
Vapor Density (Air=1):	Not Determined
Percent Volatiles:	25.8
Evaporation Rate (Butyl Acetate=1):	Not Determined
Solubility in Water (g/100ml):	Disperses
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	Keep away from heat, sparks and flame.
Incompatibility (Materials to Avoid)	Strong oxidizers. Violent, explosive reaction with sulfur trioxide, decaborane, silver perchlorate, triethenyl aluminum, and hydrogen in presence of nickel catalyst at temperatures above 200 C.
Hazardous Decomposition Products	Oxides of nitrogen. Carbon monoxide and carbon dioxide.
Additional Guidelines	Not Applicable

11. TOXICOLOGICAL INFORMATION

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

Eye Contact	May cause eye burns.
Ingestion	May be fatal or cause blindness if swallowed. May cause abdominal pain, vomiting, nausea, and diarrhea. 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. May cause liver and kidney damage.
Aggravated Medical Conditions	Skin disorders. Liver disorders.
Chronic Effects/Carcinogenicity	Prolonged or repeated exposure may cause eye, blood, lung, liver, kidney, heart, central nervous system and spleen damage. Contains formamide which may cause embryo toxicity. This product contains trace amounts of benzyl chloride, which has been evaluated by International Agency for Research on Cancer (IARC) and found to be possibly carcinogenic to humans.
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

UN2924, Flammable Liquid, Corrosive, N.O.S.(Contains Methanol, Quaternary Ammonium Compounds), 3, (8), II, (16.7 C)
NAERG 132

Canadian TDG

Flammable Liquid, Corrosive, N.O.S.(Contains Methanol, Quaternary Ammonium Compounds), 3, (8), UN2924, II, (16.7 C)

ADR

UN2924, Flammable Liquid, Corrosive, N.O.S.(Contains Methanol, Quaternary Ammonium Compounds), 3, (8), II

Air Transportation

ICAO/IATA

UN2924, Flammable Liquid, Corrosive, N.O.S., 3, (8), II
(Contains Methanol, Quaternary Ammonium Compounds)

Sea Transportation

IMDG

UN2924, Flammable Liquid, Corrosive, N.O.S.(Contains Methanol, Quaternary Ammonium Compounds), 3, (8), II, (16.7 C)
EmS F-E, S-C

Other Transportation Information

Labels: Flammable Liquid
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
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 Benzyl Chloride//100-44-7 Isopropanol//67-63-0
EPA CERCLA/Superfund Reportable Spill Quantity	EPA Reportable Spill Quantity is 2267 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	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	All components listed on inventory or are exempt.
WHMIS Hazard Class	B2 Flammable Liquids E Corrosive Material D1A Very Toxic Materials 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.

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