

# 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  
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
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.

<b>Ingestion</b>	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.
<b>Notes to Physician</b>	Contains acetylenic alcohols, no known antidote. Treat symptomatically. Probable mucosal damage may contraindicate the use of gastric lavage.

## 5. FIRE FIGHTING MEASURES

<b>Flash Point/Range (F):</b>	62
<b>Flash Point/Range (C):</b>	16
<b>Flash Point Method:</b>	Not Determined
<b>Autoignition Temperature (F):</b>	Not Determined
<b>Autoignition Temperature (C):</b>	Not Determined
<b>Flammability Limits in Air - Lower (%):</b>	0.8
<b>Flammability Limits in Air - Upper (%):</b>	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.

<b>Skin Protection</b>	Full protective chemical resistant clothing.
<b>Eye Protection</b>	Chemical goggles; also wear a face shield if splashing hazard exists.
<b>Other Precautions</b>	Eyewash fountains and safety showers must be easily accessible.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State:</b>	Liquid
<b>Color:</b>	Clear dark brown
<b>Odor:</b>	Alcohol
<b>pH:</b>	Not Determined
<b>Specific Gravity @ 20 C (Water=1):</b>	1.01
<b>Density @ 20 C (lbs./gallon):</b>	8.40
<b>Bulk Density @ 20 C (lbs/ft3):</b>	Not Determined
<b>Boiling Point/Range (F):</b>	149
<b>Boiling Point/Range (C):</b>	65
<b>Freezing Point/Range (F):</b>	-80
<b>Freezing Point/Range (C):</b>	-63
<b>Vapor Pressure @ 20 C (mmHg):</b>	91.52
<b>Vapor Density (Air=1):</b>	Not Determined
<b>Percent Volatiles:</b>	25.8
<b>Evaporation Rate (Butyl Acetate=1):</b>	Not Determined
<b>Solubility in Water (g/100ml):</b>	Disperses
<b>Solubility in Solvents (g/100ml):</b>	Not Determined
<b>VOCs (lbs./gallon):</b>	Not Determined
<b>Viscosity, Dynamic @ 20 C (centipoise):</b>	Not Determined
<b>Viscosity, Kinematic @ 20 C (centistokes):</b>	Not Determined
<b>Partition Coefficient/n-Octanol/Water:</b>	Not Determined
<b>Molecular Weight (g/mole):</b>	Not Determined

## 10. STABILITY AND REACTIVITY

<b>Stability Data:</b>	Stable
<b>Hazardous Polymerization:</b>	Will Not Occur
<b>Conditions to Avoid</b>	Keep away from heat, sparks and flame.
<b>Incompatibility (Materials to Avoid)</b>	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.
<b>Hazardous Decomposition Products</b>	Oxides of nitrogen. Carbon monoxide and carbon dioxide.
<b>Additional Guidelines</b>	Not Applicable

## 11. TOXICOLOGICAL INFORMATION

<b>Principle Route of Exposure</b>	Eye or skin contact, inhalation.
<b>Inhalation</b>	May cause respiratory irritation. May cause central nervous system depression including headache, dizziness, drowsiness, incoordination, slowed reaction time, slurred speech, giddiness and unconsciousness.
<b>Skin Contact</b>	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.

<b>Eye Contact</b>	May cause eye burns.
<b>Ingestion</b>	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.
<b>Aggravated Medical Conditions</b>	Skin disorders. Liver disorders.
<b>Chronic Effects/Carcinogenicity</b>	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.
<b>Other Information</b>	None known.
<b>Toxicity Tests</b>	
<b>Oral Toxicity:</b>	Not determined
<b>Dermal Toxicity:</b>	Not determined
<b>Inhalation Toxicity:</b>	Not determined
<b>Primary Irritation Effect:</b>	Not determined
<b>Carcinogenicity</b>	Not determined
<b>Genotoxicity:</b>	Not determined
<b>Reproductive / Developmental Toxicity:</b>	Not determined

## 12. ECOLOGICAL INFORMATION

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

### Ecotoxicological Information

<b>Acute Fish Toxicity:</b>	Not determined
<b>Acute Crustaceans Toxicity:</b>	Not determined
<b>Acute Algae Toxicity:</b>	Not determined
<b>Chemical Fate Information</b>	Not determined
<b>Other Information</b>	Not applicable

## 13. DISPOSAL CONSIDERATIONS

<b>Disposal Method</b>	Disposal should be made in accordance with federal, state, and local regulations.
<b>Contaminated Packaging</b>	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

<b>EPA SARA (313) Chemicals</b>	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
<b>EPA CERCLA/Superfund Reportable Spill Quantity</b>	EPA Reportable Spill Quantity is 2267 Gallons based on Propargyl alcohol (CAS: 107-19-7).
<b>EPA RCRA Hazardous Waste Classification</b>	If product becomes a waste, it does meet the criteria of a hazardous waste as defined by the US EPA, because of:  Ignitability D001
<b>California Proposition 65</b>	The California Proposition 65 regulations apply to this product.
<b>MA Right-to-Know Law</b>	One or more components listed.
<b>NJ Right-to-Know Law</b>	One or more components listed.
<b>PA Right-to-Know Law</b>	One or more components listed.
<b>Canadian Regulations</b>	
<b>Canadian DSL Inventory</b>	All components listed on inventory or are exempt.
<b>WHMIS Hazard Class</b>	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\*\*\*