

MATERIAL SAFETY DATA SHEET

Product Trade Name: HAI-404

Revision Date: 25-Apr-2013

Revision Number: 7

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Trade Name: HAI-404
Synonyms: None
Chemical Family: Blend
Internal ID Code: HM005458

Product Use

Application: Corrosion Inhibitor

Manufacturer's Name and Contact Details

Name and Address Halliburton Energy Services
645 - 7th Ave SW Suite 2200
Calgary, AB
T2P 4G8
Canada
Emergency Telephone Number (281) 575-5000

Prepared By

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2. HAZARD(S) IDENTIFICATION

WHMIS Classification

WHMIS Hazard Class B2 Flammable Liquids
D1B Toxic Materials
D2A Very Toxic Materials
D2B Toxic Materials

WHMIS Symbol(s)



Summary of hazards of the product
Hazard Overview

May cause eye, skin, and respiratory irritation. May cause headache, dizziness, and other central nervous system effects. May be fatal if swallowed. May cause blindness. May be absorbed through the skin. Repeated overexposure may cause liver and kidney effects. Flammable.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances	CAS Number	PERCENT (w/w)	HMIRC Registry Number	Filing Date
Aldehyde	Proprietary	10 - 30%		
1-(Benzyl)quinolinium chloride	15619-48-4	5 - 10%		
Isopropanol	67-63-0	10 - 30%		
Methanol	67-56-1	10 - 30%		

4. FIRST AID MEASURES**Description of 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.

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.

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.

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.

Most important symptoms and effects, both acute and delayed

May cause eye, skin, and respiratory irritation. May cause headache, dizziness, and other central nervous system effects. May be harmful if swallowed. May cause blindness.

Indication of any immediate medical attention and special treatment needed**Notes to Physician**

Treat symptomatically

5. FIRE FIGHTING MEASURES**Extinguishing media****Suitable Extinguishing Media**

Carbon dioxide, dry chemical, foam.

Extinguishing media which must not be used for safety reasons

None known.

Special hazards arising from the substance of mixture**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. Runoff to sewer may cause fire or explosion hazard.

Advice for firefighters**Special Protective Equipment for Fire-Fighters**

Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.

Hazardous combustion products

Ammonia. Oxides of nitrogen. Oxides of phosphorus. Hydrocarbons. Carbon monoxide and carbon dioxide.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions and emergency procedures****Protective Equipment**

6. ACCIDENTAL RELEASE 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

Precautions for safe handling

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.

Conditions for safe storage and Incompatible materials for storage

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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

Substances	CAS Number	ACGIH TLV-TWA	OSHA PEL-TWA
Aldehyde	Proprietary	Not applicable	Not applicable
1-(Benzyl)quinolinium chloride	15619-48-4	Not applicable	Not applicable
Isopropanol	67-63-0	TWA: 200 ppm STEL: 400 ppm	400 ppm
Methanol	67-56-1	TWA: 200 ppm STEL: 250 ppm	200 ppm

Appropriate engineering controls

Engineering Controls

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

Personal Protective Equipment (PPE)

Respiratory Protection

Positive pressure self-contained breathing apparatus if methanol is released.

Hand Protection

Impervious rubber gloves.

Skin Protection

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

Information on basic physical and chemical properties

Physical State: Liquid
Odor: Alcohol

Color: Dark brown
Odor Threshold: No information available.

Property
Remarks/ Method
pH:

Values
2-4

9. PHYSICAL AND CHEMICAL PROPERTIES

pH Concentration of Solution:	No information available.
Melting Point/Range	No information available
Freezing Point/Range (C):	< -34.4°C
Boiling Point/Range (C):	No information available.
Flash Point/Range (C):	16.7°C
Flash Point Method:	PMCC
Autoignition Temperature (C):	No information available.
Flammability Limits in Air - Lower (%):	No information available.
Flammability Limits in Air - Upper (%):	No information available.
Evaporation Rate (Butyl Acetate=1):	No information available.
Vapor Pressure @ 20 C (mmHg):	No information available.
Vapor Density (Air=1):	No information available.
Specific Gravity @ 20 C (Water=1):	0.979
Solubility in Water (g/100ml):	Soluble
Solubility in other solvents	No information available.
Partition Coefficient/n-Octanol/Water:	No information available.
Decomposition Temperature (C):	No information available.
Viscosity	No information available
Explosive Properties	No information available
Oxidizing Properties	No information available

Other information

Molecular Weight (g/mole):	No information available.
VOC Content (%)	No information available

10. STABILITY AND REACTIVITY**Conditions of Reactivity****Conditions to Avoid**

Keep away from heat, sparks and flame.

Hazardous Polymerization:

Will Not Occur

Chemical Stability

Stable

Sensitivity to Static Discharge

Not available

Sensitivity to Mechanical Impact

Not available

Incompatible Materials

Strong oxidizers.

Hazardous Decomposition Products

Ammonia. Oxides of nitrogen. Oxides of phosphorus. Hydrocarbons. Carbon monoxide and carbon dioxide.

11. TOXICOLOGICAL INFORMATION**Routes of entry**

Eye or skin contact, inhalation.

Information on Toxicological Effects**Acute effects from exposure**

11. TOXICOLOGICAL INFORMATION

Inhalation	May cause respiratory irritation. May cause central nervous system depression including headache, dizziness, drowsiness, incoordination, slowed reaction time, slurred speech, giddiness and unconsciousness.
Eye Contact	May cause eye irritation.
Skin Contact	May cause skin irritation. May be absorbed through the skin and produce effects similar to those caused by inhalation and/or ingestion.
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. May cause liver and kidney damage.
Chronic effects from exposure Chronic Effects/Carcinogenicity	Prolonged or repeated exposure may cause eye, blood, lung, liver, kidney, heart, central nervous system and spleen damage.
Irritancy of product Irritation	Irritating to eyes and skin
Sensitization of product Sensitization	Not confirmed to cause skin or respiratory sensitization.
Mutagenicity Mutagenic Effects	Not regarded as mutagenic
Carcinogenicity Carcinogenic Effects	No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC, NTP, or OSHA.
Reproductive Toxicity Reproductive Toxicity	This product does not contain any known or suspected reproductive hazards
Teratogenicity/embryotoxicity Teratogenic	Fetotoxic and teratogenic effects observed in experimental animals at concentrations that did not produce maternal toxicity.
Toxicologically synergistic material	Methanol: In animals, high concentrations can increase the toxicity of other chemicals, particularly liver toxins like carbon tetrachloride. Ethanol significantly decreases the toxicity, because it competes for the same metabolic enzymes. Isopropanol: Enhanced by the toxicity of carbon tetrachloride, 1,1,2-trichloroethane, chloroform, trichloroethylene, and dimethylnitrosamine (possibly carbon tetrachloride).

Acute Toxicity

Substances	LD50 Oral	LD50 Dermal	LC50 Inhalation
Aldehyde	2200 mg/kg (Rat) 1160 mg/kg (Guinea pig)	2000 mg/kg (Rabbit) 2000 mg/kg (Rat)	No data available
1-(Benzyl)quinolinium chloride	No data available	No data available	No data available
Isopropanol	4396 mg/kg (Rat) 3600 mg/kg (mouse)	12800 mg/kg (Rat) 12870 mg/kg (Rabbit)	72.6 mg/L (Rat) 4 h
Methanol	5628 mg/kg (Rat) 300 mg/kg (Human)	15800 mg/kg (Rabbit) 393 mg/kg (Primate)	64000 ppm (Rat) 4 h 83.2 mg/L (Rat) 4 h 10 mg/L (Human)

12. ECOLOGICAL INFORMATION

Toxicity Ecotoxicity Effects

Substances	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Aldehyde	EC50: 0.13 mg/L (Chlorella vulgaris)	No information available	No information available	No information available
1-(Benzyl)quinolinium chloride	No information available	No information available	No information available	No information available
Isopropanol	EC50: > 1000 mg/l (Desmodesmus subspicatus)	LC50: 9640 mg/l (Pimephales promelas)	No information available	EC50: 13299 mg/l (Daphnia magna)
Methanol	No information available	LC50: 28200 mg/l (Pimephales promelas)	No information available	No information available

Persistence and degradability

No information available

Bioaccumulative potential

No information available

Substances	Log Pow
Methanol	-0.77

Mobility in soil

No information available

Results of PBT and vPvB assessment

No information available.

Other adverse effects

Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors

13. DISPOSAL CONSIDERATIONS

Disposal Method

Disposal should be made in accordance with federal, state, and local regulations. Incineration recommended in approved incinerator according to federal, state, and local regulations.

Contaminated Packaging

Follow all applicable national or local regulations.

14. TRANSPORT INFORMATION

Canadian TDG

UN Number: UN1993,
UN Proper Shipping Name: Flammable Liquid, N.O.S.
Transport Hazard Class(es): , 3
Packing Group: , II
EMS: EmS F-E, S-E

IATA/ICAO

UN Number: UN1993,
UN Proper Shipping Name: Flammable Liquid, N.O.S.

14. TRANSPORT INFORMATION

Transport Hazard Class(es): , 3
Packing Group: , II

IMDG/IMO

UN Number: UN1993,
UN Proper Shipping Name: Flammable Liquid, N.O.S.
Transport Hazard Class(es): , 3
Packing Group: , II
EMS: EmS F-E, S-E

Special Precautions for User None

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

15. REGULATORY INFORMATION

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Canadian Regulations

Canadian DSL Inventory
WHMIS Hazard Class

All components listed on inventory or are exempt.

B2 Flammable Liquids
D1B Toxic Materials
D2A Very Toxic Materials
D2B Toxic Materials

WHMIS Symbol(s)

**US Regulations**

US TSCA Inventory

All components listed on inventory or are exempt.

16. OTHER INFORMATION**Preparation Information**

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Revision Date: 25-Apr-2013

The following sections have been revised since the last issue of this SDS

Not applicableNot 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.

16. OTHER INFORMATION

Key or legend to abbreviations and acronyms

WHMIS: Workplace Hazardous Materials Information System

Key literature references and sources for data

www.ChemADVISOR.com/

Disclaimer Statement

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