

MATERIAL SAFETY DATA SHEET

Product Trade Name: DCA-17007

Revision Date: 29-Oct-2014

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Trade Name: DCA-17007
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

Prepared By Chemical Compliance
Telephone: 1-580-251-4335
e-mail: fdunexchem@halliburton.com

2. COMPOSITION/INFORMATION ON INGREDIENTS

Substances	CAS Number	PERCENT (w/w)	ACGIH TLV-TWA	OSHA PEL-TWA
Methanol	67-56-1	10 - 30%	TWA: 200 ppm STEL: 250 ppm Skin	TWA: 200 ppm
Isopropanol	67-63-0	30 - 60%	TWA: 200 ppm STEL: 400 ppm	400 ppm
A quaternary ammonium salt	Proprietary	1 - 5%	Not applicable	Not applicable
Benzylheteropolycycle salt	Proprietary	10 - 30%	Not applicable	Not applicable
2-Mercaptoethanol	60-24-2	5 - 10%	Not applicable	Not applicable
Ethoxylated branched C13 alcohol	78330-21-9	10 - 30%	Not applicable	Not applicable

3. HAZARDS IDENTIFICATION

Hazard Overview May cause eye burns. May cause 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.

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	Not Applicable

5. FIRE FIGHTING MEASURES

Flash Point/Range (F):	73
Flash Point/Range (C):	22.8
Flash Point Method:	Not Determined
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 Carbon Dioxide, Dry Chemicals, Foam.

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.

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

Storage Information Keep from heat, sparks, and open flames. Store away from oxidizers. Store in a well ventilated area. Store in a cool, dry location. Store locked up. 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	Neoprene gloves. Nitrile gloves. Butyl rubber gloves.
Skin Protection	Rubber apron. 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:	Amber
Odor:	Amine
pH:	1.73 - 3.73
Specific Gravity @ 20 C (Water=1):	0.9344 - 0.9644
Density @ 20 C (lbs./gallon):	7.91
Bulk Density @ 20 C (lbs/ft3):	Not Determined
Boiling Point/Range (F):	148.3
Boiling Point/Range (C):	64.6
Freezing Point/Range (F):	< -40
Freezing Point/Range (C):	< -40
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):	5 - 10
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	Oxides of nitrogen. Carbon monoxide and carbon dioxide.
Additional Guidelines	Not Applicable

11. TOXICOLOGICAL INFORMATION

Principle Route of Exposure	Eye or skin contact, inhalation. Ingestion.
------------------------------------	---

Symptoms related to exposure

Acute Toxicity

Product Information

Inhalation

Under certain conditions of use, some of the product ingredients may cause the following:
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 severe eye irritation. May cause permanent eye damage.

Skin Contact

May cause skin irritation. May cause an allergic skin reaction. 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/Carcinogenicity

Prolonged or repeated exposure may cause eye, blood, lung, liver, kidney, heart, central nervous system and spleen damage.

Toxicology data for the components

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Methanol	67-56-1	> 1187 - 2769 mg/kg (Rat) 3000 mg/kg (Monkey) 300 mg/kg (Human)	15800 mg/kg (Rabbit) 393 mg/kg (Primate)	87.5 mg/L (Rat) 6h vapour 128.2 mg/L (Rat) 4h vapour 83.2 mg/L (Rat) 4 h 64000 ppm (Rat) 4 h 10 mg/L (Human)
Isopropanol	67-63-0	4396 mg/kg (Rat) 5840 mg/kg (Rat) 3600 mg/kg (Mouse)	12800 mg/kg (Rat) 12870 mg/kg (Rabbit) 16.4 mL/kg (Rabbit) 6280 mg/kg (Rabbit)	72.6 mg/L (Rat) 4h >10000 ppm (Rat) 6h
A quaternary ammonium salt	Proprietary	No data available	No data available	No data available
Benzylheteropolycycle salt	Proprietary	No data available	No data available	No data available
2-Mercaptoethanol	60-24-2	244 mg/kg (Rat)	150 µL/kg (Rabbit)	No data available
Ethoxylated branched C13 alcohol	78330-21-9	1700 mg/kg (Rat) 1650 mg/kg (Dog) 1100 mg/kg (Rat) (similar substance) 2850 mg/kg (Rat)	> 2000 mg/kg (Rabbit) (similar substance)	> saturated concentration (similar substance)

12. ECOLOGICAL INFORMATION

Ecotoxicological Information

Ecotoxicity Product

Acute Fish Toxicity: Not determined

Acute Crustaceans Toxicity: Not determined

Acute Algae Toxicity: Not determined

Ecotoxicity Substance

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Methanol	67-56-1	EC50(96h): ca. 22000 mg/L (Pseudokirchnerella subcapitata, Growth rate)	LC50: 28200 mg/l (Pimephales promelas) LC50(96h): 12700 – 15400 mg/L (Lepomis macrochirus) 200 hr NOEC for % Embryo-cardiovascular for stage 2 = 15800 mg/L	IC50(3h): > 1000 mg/L (activated sludge)	EC50(96h): 18260 mg/L (Daphnia magna) NOEC(21d): 122 mg/L (Daphnia magna, Reproduction)

Isopropanol	67-63-0	EC50(72h): > 1000 mg/L(Desmodesmus subspicatus) EC50(7d): 1800 mg/L (mean extinction value) (Scenedesmus quadricauda)	LC50(96h): 9640 mg/L (Pimephales promelas) LC50(7d): 7060 mg/L (Poecilia reticulata)	TT(16h): 1050 mg/L (Pseudomonas putida)	EC50(48h): 13299 mg/L (Daphnia magna) EC50(24h): > 10000 mg/L (Daphnia magna)
A quaternary ammonium salt	Proprietary	No information available	No information available	No information available	No information available
Benzylheteropolycycle salt	Proprietary	No information available	No information available	No information available	No information available
2-Mercaptoethanol	60-24-2	No information available	No information available	No information available	No information available
Ethoxylated branched C13 alcohol	78330-21-9	EC50(48h): 2-4 mg/L (Selenastrum capricornutum) (Similar substance) EC50(72h): 0.282 mg/L (growth rate) (Selenastrum capricornutum) (Similar substance) EC10: 0.137 mg/L (growth rate) (Scenedesmus subspicatus) (Similar substance)	2.6 mg/L (Brachydanio rerio) (Similar substance) LC50(96h): 1.1 mg/L (Salmo gairdneri) (Similar substance) NOEC: 0.88 mg/L (reproduction) (Lepomis macrochirus) (Similar substance)	No information available	EC50(48h): 1.2 mg/L (Daphnia magna) (Similar substance) EC50(48h): 0.6 mg/L (Daphnia magna) (Similar substance) NOEC(21d): 0.77 mg/L (reproduction) (Daphnia magna) (Similar substance)

12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Methanol	67-56-1	Readily biodegradable (95-97% @ 20d)
Isopropanol	67-63-0	Readily biodegradable (53% @ 5d)
A quaternary ammonium salt	Proprietary	No information available
Benzylheteropolycycle salt	Proprietary	No information available
2-Mercaptoethanol	60-24-2	No information available
Ethoxylated branched C13 alcohol	78330-21-9	Readily biodegradable (85% @ 28d)

12.3. Bioaccumulative potential

Substances	CAS Number	Log Pow
Methanol	67-56-1	-0.77 BCF 1.0 – 4.5 (Cyprinus carpio) BCF < 10 (Leuciscus idus melanotus)
Isopropanol	67-63-0	0.05 @ 25°C
A quaternary ammonium salt	Proprietary	No information available
Benzylheteropolycycle salt	Proprietary	No information available
2-Mercaptoethanol	60-24-2	No information available
Ethoxylated branched C13 alcohol	78330-21-9	5.17

12.4. Mobility in soil

No information available

12.5. Results of PBT and vPvB assessment

No information available.

Substances	PBT and vPvB assessment
Methanol	Not PBT/vPvB
Isopropanol	Not PBT/vPvB

12.6. Other adverse effects

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. Substance should NOT be deposited into a sewage facility.
Contaminated Packaging	Follow all applicable national or local regulations. Contaminated packaging may be disposed of by: rendering packaging incapable of containing any substance, or treating packaging to remove residual contents, or treating packaging to make sure the residual contents are no longer hazardous, or by disposing of packaging into commercial waste collection.

14. TRANSPORT INFORMATION

US DOT

UN Number: UN1993
UN Proper Shipping Name: Flammable Liquid, N.O.S. (Contains Isopropanol, Methanol)
Transport Hazard Class(es): 3
Packing Group: II
Environmental Hazards: Marine Pollutant (2-Mercaptoethanol, Ethoxylated Alcohols)
NAERG: NAERG 128

US DOT Bulk

DOT (Bulk) Not Applicable

Canadian TDG ul0

UN Number: UN1993
UN Proper Shipping Name: Flammable Liquid, N.O.S. (Contains Isopropanol, Methanol)
Transport Hazard Class(es): 3
Packing Group: II
Environmental Hazards: Marine Pollutant (2-Mercaptoethanol, Ethoxylated Alcohols)

IMDG/IMO

UN Number: UN1993
UN Proper Shipping Name: Flammable Liquid, N.O.S. (Contains Isopropanol, Methanol)
Transport Hazard Class(es): 3
Packing Group: II
Environmental Hazards: Marine Pollutant (2-Mercaptoethanol, Ethoxylated Alcohols)
EMS: EmS F-E, S-E

IATA/ICAO

UN Number: UN1993
UN Proper Shipping Name: Flammable Liquid, N.O.S. (Contains Isopropanol, Methanol)
Transport Hazard Class(es): 3
Packing Group: II
Environmental Hazards: Marine Pollutant (2-Mercaptoethanol, Ethoxylated Alcohols)

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable

Special Precautions for User: None

Labels:

Flammable Liquid
 Environmentally Hazardous Substance

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 Isopropanol//67-63-0
EPA CERCLA/Superfund Reportable Spill Quantity	EPA Reportable Spill Quantity is 4880 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	B2 Flammable Liquids D1B Toxic Materials D2A Very Toxic Materials D2B Toxic Materials

16. OTHER INFORMATION

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

Section 3. Composition/Information of Ingredients

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.
Disclaimer Statement	This information is furnished without warranty, expressed or implied, as to accuracy or completeness. The information is obtained from various sources including the manufacturer and other third party sources. The information may not be valid under all conditions nor if this material is used in combination with other materials or in any process. Final determination of suitability of any material is the sole responsibility of the user.

END OF MSDS