

MATERIAL SAFETY DATA SHEET

Product Trade Name: DCA-17002

Revision Date: 12-Jan-2015

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Trade Name: DCA-17002
Synonyms: None
Chemical Family: Blend
Application: Corrosion Inhibitor

Manufacturer/Supplier: Halliburton Energy Services
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2. COMPOSITION/INFORMATION ON INGREDIENTS

Substances	CAS Number	PERCENT (w/w)	ACGIH TLV-TWA	OSHA PEL-TWA
Methanol	67-56-1	30 - 60%	TWA: 200 ppm STEL: 250 ppm Skin	TWA: 200 ppm
Propargyl alcohol	107-19-7	5 - 10%	TWA: 1 ppm	Not applicable
Thiourea, polymer with formaldehyde and 1-phenylethanone	68527-49-1	10 - 30%	Not applicable	Not applicable
Alcohols, C14-C15, ethoxylated	68951-67-7	10 - 30%	Not applicable	Not applicable
Alkenes, C >10 alpha-	64743-02-8	1 - 5%	Not applicable	Not applicable

3. HAZARDS IDENTIFICATION

Hazard Overview May cause eye and skin burns. 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	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	Probable mucosal damage may contraindicate the use of gastric lavage.

5. FIRE FIGHTING MEASURES

Flash Point/Range (F):	Not Determined Max: < 52
Flash Point/Range (C):	< 11 Max: < 11
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 Water fog, carbon dioxide, foam, dry chemical.

Special Exposure Hazards May be ignited by heat, sparks or flames. Decomposition in fire may produce toxic gases. Use water spray to cool fire exposed surfaces. Closed containers may explode in fire. Avoid spraying water directly into storage containers due to danger of boilover. Vapors are heavier than air and may accumulate in low areas. Vapors may travel along the ground to be ignited at distant locations.

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, 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. 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

If engineering controls and work practices cannot keep exposure below occupational exposure limits or if exposure is unknown, wear a NIOSH certified, European Standard EN 149, AS/NZS 1715:2009, or equivalent respirator when using this product. Selection of and instruction on using all personal protective equipment, including respirators, should be performed by an Industrial Hygienist or other qualified professional.
Positive pressure self-contained breathing apparatus if methanol is released.

Hand Protection

Chemical-resistant protective gloves (EN 374) Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374): Butyl rubber gloves. (≥ 0.7 mm thickness)
This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced. Manufacturer's directions for use should be observed because of great diversity of types.

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 amber
Odor:	Alcohol
pH:	4 - 6
Specific Gravity @ 20 C (Water=1):	0.89
Density @ 20 C (lbs./gallon):	7.41
Bulk Density @ 20 C (lbs/ft ³):	Not Determined
Boiling Point/Range (F):	Not Determined
Boiling Point/Range (C):	Not Determined
Freezing Point/Range (F):	-20
Freezing Point/Range (C):	-29
Vapor Pressure @ 20 C (mmHg):	Not Determined
Vapor Density (Air=1):	>1
Percent Volatiles:	Not Determined
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. Avoid contact with acids. Avoid contact with oxidizers.
Incompatibility (Materials to Avoid)	Strong oxidizers. Strong acids. Strong alkalis.
Hazardous Decomposition Products	Oxides of sulfur. Carbon monoxide and carbon dioxide.
Additional Guidelines	Not Applicable

11. TOXICOLOGICAL INFORMATION

Principle Route of Exposure Eye or skin contact, inhalation.

Symptoms related to exposure

Acute Toxicity

Inhalation

Causes severe respiratory irritation. May cause chemical pneumonia. May cause central nervous system depression including headache, dizziness, drowsiness, incoordination, slowed reaction time, slurred speech, giddiness and unconsciousness.

Eye Contact

Causes severe eye burns.

Skin Contact

Causes burns. 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. Causes burns of the mouth, throat and stomach. 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.

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)
Propargyl alcohol	107-19-7	20 mg/kg (Rat) 20-50 mg/kg (Rat) 93-110 mg/kg (Rat) 54-55 mg/kg (Rat) 56.4 mg/kg (Rat) 145 mg/kg (Rat)	16 mg/kg (Rabbit) 88 mg/kg (Rabbit)	600 ppm (Rat, 4h) 520 ppm (Female Rat, 4h) 1.6 mg/L (Rat, 2h) 1040 ppm (Female Rat, 1h)
Thiourea, polymer with formaldehyde and 1-phenylethanone	68527-49-1	No data available	No data available	No data available
Alcohols, C14-C15, ethoxylated	68951-67-7	1600 mg/kg (Rat) (similar substance)	> 2000 mg/kg (Rat) (similar substance)	> 0.22 mg/L (Rat, 4h, vapor) (saturation)
Alkenes, C >10 alpha-	64743-02-8	>5050 mg/kg (Rat) (similar substance) >10,000 mg/kg (Rat) (similar substance)	>10,000 mg/kg (Rabbit) (similar substance)	3.69 mg/L (Rat) 4h (similar substance) >2.1 mg/L (Rat) (similar substance)

12. ECOLOGICAL INFORMATION

Ecotoxicological Information

Ecotoxicity Product

Acute Fish Toxicity: TLM96: 8132 mg/l (Cyprinodon variegatus)
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)
Propargyl alcohol	107-19-7	EC50(72h): > 98.1 mg/L (Desmodesmus subspicatus) (biomass and growth rate)	LC50: 1.49-1.56 mg/L (Pimephales promelas) LC50(96h): 1.53 mg/L (Pimephales promelas)	EC50(30 min) > 1000 mg/L (Activated sludge, domestic)	EC50:32 mg/L (Daphnia magna) EC50(48h): 3.36 mg/L (Daphnia magna)
Thiourea, polymer with formaldehyde and 1-phenylethanone	68527-49-1	No information available	No information available	No information available	No information available
Alcohols, C14-C15, ethoxylated	68951-67-7	EC50(96h): 0.1 mg/L (Selenastrum capricornutum)	LC50(96h): 1 mg/L (Pimephales promelas) NOEC(30d): 0.28 mg/L (Pimephales promelas) NOEC(16d): 0.1 mg/L (Lepomis macrochirus)	No information available	EC50(48h): 1.2 mg/L (Daphnia Magna)
Alkenes, C >10 alpha-	64743-02-8	NOELr (72h) 1000 mg/L (Pseudokirchneriella subcapitata) (similar substance)	LL50 (96h) >1000 mg/L (Oncorhynchus mykiss) (similar substance)	No information available	EL50 (48h) >1000 mg/L (Daphnia magna) (similar substance) LC50 (10d) 86.95 mg/kg (Corophium volutator) (similar substance)

12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Methanol	67-56-1	Readily biodegradable (95-97% @ 20d)
Propargyl alcohol	107-19-7	Readily biodegradable (95% @ 28d)
Thiourea, polymer with formaldehyde and 1-phenylethanone	68527-49-1	No information available
Alcohols, C14-C15, ethoxylated	68951-67-7	Readily biodegradable (72% @ 28d)
Alkenes, C >10 alpha-	64743-02-8	No information available

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)
Propargyl alcohol	107-19-7	-0.35 @ 25°C BCF: 3
Thiourea, polymer with formaldehyde and 1-phenylethanone	68527-49-1	No information available
Alcohols, C14-C15, ethoxylated	68951-67-7	6.03
Alkenes, C >10 alpha-	64743-02-8	Log Kow = 4.13-6.59

12.4. Mobility in soil

12.5. Results of PBT and vPvB assessment

Substances	PBT and vPvB assessment
Methanol	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.
Contaminated Packaging	Follow all applicable national or local regulations.

14. TRANSPORT INFORMATION

US DOT

UN Number:	UN2924
UN Proper Shipping Name:	Flammable Liquid, Corrosive, N.O.S. (Contains Methanol, Propargyl Alcohol)
Transport Hazard Class(es):	3
Subsidiary Hazard:	(8)
Packing Group:	II
NAERG:	NAERG 132

US DOT Bulk

DOT (Bulk)	Not applicable
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Canadian TDG ul0

UN Number:	UN2924
UN Proper Shipping Name:	Flammable Liquid, Corrosive, N.O.S. (Contains Methanol, Propargyl Alcohol)
Transport Hazard Class(es):	3
Subsidiary Hazard:	(8)
Packing Group:	II

IMDG/IMO

UN Number:	UN2924
UN Proper Shipping Name:	Flammable Liquid, Corrosive, N.O.S. (Contains Methanol, Propargyl Alcohol)
Transport Hazard Class(es):	3
Subsidiary Hazard:	(8)
Packing Group:	II
EMS:	EmS F-E, S-C

IATA/ICAO

UN Number:	UN2924
UN Proper Shipping Name:	Flammable Liquid, Corrosive, N.O.S. (Contains Methanol, Propargyl Alcohol)
Transport Hazard Class(es):	3
Subsidiary Hazard:	(8)
Packing Group:	II

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
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
EPA CERCLA/Superfund Reportable Spill Quantity	EPA Reportable Spill Quantity is 1435 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	All components listed on inventory or are exempt.
WHMIS Hazard Class	B2 Flammable Liquids E Corrosive Material D1A Very Toxic Materials 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

Not 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.

Disclaimer Statement

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