HALLIBURTON

MATERIAL SAFETY DATA SHEET

Product Trade Name: **DCA-31005**

Revision Date: 13-May-2014

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Trade Name: DCA-31005
Synonyms: None
Chemical Family: Blend
Application: Solvent

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
Heavy aromatic petroleum naphtha	64742-94-5	30 - 60%	Not applicable	Not applicable
Naphthalene	91-20-3	5 - 10%	TWA: 10 ppm STEL: 15 ppm	10 ppm
1,2,4 Trimethylbenzene	95-63-6	1 - 5%	25 ppm	Not applicable

3. HAZARDS IDENTIFICATION

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

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
Get medical attention! If vomiting occurs, keep head lower than hips to prevent aspiration.

Notes to Physician Not Applicable

5. FIRE FIGHTING MEASURES

Flash Point/Range (F):	152
Flash Point/Range (C):	67
Flash Point Method:	PMCC
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.

Special Protective Equipment for Fire-Fighters Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.

NFPA Ratings: Health 1, Flammability 2, Reactivity 0
HMIS Ratings: Health 1, Flammability 2, Physical Hazard 0 , PPE: H

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.

Storage Information Store away from oxidizers. Store in a 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 Organic vapor respirator.

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

Physical State:	Liquid
Color:	Clear amber
Odor:	Hydrocarbon
pH:	Not Determined
Specific Gravity @ 20 C (Water=1):	0.89 - 0.93
Density @ 20 C (lbs./gallon):	7.58
Bulk Density @ 20 C (lbs/ft3):	Not Determined
Boiling Point/Range (F):	352
Boiling Point/Range (C):	178
Freezing Point/Range (F):	-29
Freezing Point/Range (C):	-34
Vapor Pressure @ 20 C (mmHg):	2.54
Vapor Density (Air=1):	Not Determined
Percent Volatiles:	Not Determined
Evaporation Rate (Butyl Acetate=1):	Not Determined
Solubility in Water (g/100ml):	Insoluble
Solubility in Solvents (g/100ml):	Not Determined
VOCs (lbs./gallon):	Not Determined
Viscosity, Dynamic @ 20 C (centipoise):	30-35
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	Carbon monoxide and carbon dioxide.
Additional Guidelines	Not Applicable

11. TOXICOLOGICAL INFORMATION

Principle Route of Exposure Eye or skin contact, inhalation.

Sympotoms related to exposure

Acute Toxicity

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 mild eye irritation.
Skin Contact	May cause moderate skin irritation.

Ingestion Aspiration into the lungs may cause chemical pneumonitis including coughing, difficulty breathing, wheezing, coughing up blood and pneumonia, which can be fatal. 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 central nervous system and brain effects. Repeated overexposure may cause liver and kidney effects. Contains petroleum distillates which have been shown to cause skin cancer in laboratory animals.

Toxicology data for the components

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Heavy aromatic petroleum naphtha	64742-94-5	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	590 mg/m³ (Rat) 4 h
Naphthalene	91-20-3	490 mg/kg (Rat)	2500 mg/kg (Rat) 20 g/kg (Rabbit) 1120 mg/kg (Rabbit)	340 mg/m³ (Rat) 1 h
1,2,4 Trimethylbenzene	95-63-6	3400 mg/kg (Rat) 8970 mg/kg (Rat)	3160 mg/kg (Rabbit) > 3440 mg/kg (Rat)	18 g/m³ (Rat) 4 h

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
Heavy aromatic petroleum naphtha	64742-94-5	EC50: < 1 mg/l (Skeletonema costatum)	LC50: 2.34 mg/L (Oncorhynchus mykiss) LC50: 41 mg/L (Pimephales promelas) LC50: 0.84 mg/L (Oncorhynchus mykiss)	No information available	EC50(48h): 0.95 mg/L (Daphnia magna) EC50(48H): 0.55 mg/L (Daphnia magna)
Naphthalene	91-20-3	EC50(72h): 0.4 mg/L (Skeletonema costatum)	LC50(96h) 6.08 mg/L (Pimephales promelas) LC50(96h): 1.2 mg/L (Oncorhynchus gorbuscha) LC50(96h): 1.6 mg/L (Oncorhynchus mykiss) NOEC(40d): 0.37 mg/L (Oncorhynchus kisutch) NOEC(30d): < 0.85 mg/L Pimephales promelas)	No information available	EC50(48h): 2.16 mg/L (Daphnia magna)
1,2,4 Trimethylbenzene	95-63-6	No information available	LC50: 7.19-8.28 mg/L (Pimephales promelas)	No information available	EC50: 6.14 mg/L (Daphnia magna) LC50(48h): 3.6 mg/L (Daphnia magna) LC50(96h): 2.16 mg/L (Mysidopsis bahia)

12.2 Persistence and degradability

No information available

Substances	Persistence and Degradability
Naphthalene	Readily biodegradable (100% @ 7d)
1,2,4 Trimethylbenzene	Readily biodegradable

12.3 Bioaccumulative potential

No information available

Substances	Log Pow
Heavy aromatic petroleum naphtha	2.9 - 6.1
Naphthalene	3.28
1,2,4 Trimethylbenzene	3.42

12.4 Mobility in soil
No information available

12.5 Results of PBT and vPvB assessment
No information available.

12.6 Other adverse effects

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

US DOT
UN Number: UN3082
UN Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Contains Naphthalenes)
Transport Hazard Class(es): 9
Packing Group: III
Environmental Hazards: , Marine Pollutant
NAERG: NAERG 171

US DOT Bulk
DOT (Bulk) Not Applicable

Canadian TDG ul0
UN Number: UN3082
UN Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Contains Naphthalenes)
Transport Hazard Class(es): 9
Packing Group: III
Environmental Hazards: , Marine Pollutant

IMDG/IMO
UN Number: UN3082
UN Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Contains Naphthalenes)
Transport Hazard Class(es): 9
Packing Group: III
Environmental Hazards: , Marine Pollutant
EMS: EmS F-A, S-F

IATA/ICAO
UN Number: UN3082
UN Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Contains Naphthalenes)
Transport Hazard Class(es): 9
Packing Group: III
Environmental Hazards: , Marine Pollutant

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable
Special Precautions for User None

Labels:	Miscellaneous - Class 9 Marine Pollutant

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: Naphthalene//91-20-3
EPA CERCLA/Superfund Reportable Spill Quantity	EPA Reportable Spill Quantity is 263 Gallons based on Naphthalene (CAS: 91-20-3).
EPA RCRA Hazardous Waste Classification	If product becomes a waste, it does NOT meet the criteria of a hazardous waste as defined by the US EPA.
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	B3 Combustible Liquids D1B 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*****