multi-chem®
A HALLIBURTON SERVICE

SAFETY DATA SHEET

Product Trade Name: **MC DF-7090**

Revision Date: 15-Mar-2016 **Revision Number:** 2

1. Identification

1.1. Product Identifier

Product Trade Name: MC DF-7090
Synonyms None
Chemical Family: Blend
Internal ID Code MC000725

1.2 Recommended use and restrictions on use

Application: Defoamer
Uses advised against Consumer use

1.3 Manufacturer's Name and Contact Details

Manufacturer/Supplier
Multi-Chem Group LLC
424 S Chadbourne St
San Angelo, TX 76903
Phone: 1 325 223 6200
Emergency Phone Number: 1-866-519-4752 (US, Canada, Mexico) or 1-760-476-3962

Halliburton Energy Services
645 - 7th Ave SW Suite 2200
Calgary, AB
T2P 4G8
Canada

Prepared By Chemical Stewardship
Telephone: 1-281-871-6107
e-mail: fdunexchem@halliburton.com

1.4. Emergency telephone number

Emergency Telephone Number 1-866-519-4752 or 1-760-476-3962

2. Hazard(s) Identification

2.1 Classification in accordance with paragraph (d) of §1910.1200

Aspiration Toxicity	Category 1 - H304
Skin Corrosion / Irritation	Category 2 - H315
Serious Eye Damage/Irritation	Category 2 - H319
Germ Cell Mutagenicity	Category 1B - H340
Carcinogenicity	Category 1B - H350
Reproductive Toxicity	Category 1B - H360
Specific Target Organ Toxicity - (Single Exposure)	Category 3 - H336

Specific Target Organ Toxicity - (Repeated Exposure)	Category 2 - H373
Acute Aquatic Toxicity	Category 2 - H401
Chronic Aquatic Toxicity	Category 4 - H413
Flammable liquids.	Category 2 - H225

2.2. Label Elements

Hazard pictograms

Signal Word Danger

Hazard Statements

H225 - Highly flammable liquid and vapor
H304 - May be fatal if swallowed and enters airways
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H336 - May cause drowsiness or dizziness
H340 - May cause genetic defects
H350 - May cause cancer
H360 - May damage fertility or the unborn child
H373 - May cause damage to organs through prolonged or repeated exposure
H401 - Toxic to aquatic life
H413 - May cause long lasting harmful effects to aquatic life

Precautionary Statements

Prevention

P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
P233 - Keep container tightly closed
P240 - Ground/Bond container and receiving equipment
P241 - Use explosion-proof electrical/ventilating/lighting/equipment
P242 - Use only non-sparking tools
P243 - Take precautionary measures against static discharge
P260 - Do not breathe dust/fume/gas/mist/vapors/spray
P264 - Wash face, hands and any exposed skin thoroughly after handling
P271 - Use only outdoors or in a well-ventilated area
P273 - Avoid release to the environment
P280 - Wear protective gloves/protective clothing/eye protection/face protection

Response

P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
P301+ P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
P332 + P313 - If skin irritation occurs: Get medical advice/attention
P362 - Take off contaminated clothing and wash before reuse

	P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P308 + P313 - IF exposed or concerned: Get medical advice/attention P370 + P378 - In case of fire: Use CO2, dry chemical, or foam P391 - Collect spillage
Storage	P403 + P233 - Store in a well-ventilated place. Keep container tightly closed P403 + P235 - Store in a well-ventilated place. Keep cool P405 - Store locked up
Disposal	P501 - Dispose of contents/container in accordance with local/regional/national/international regulations

2.3 Hazards not otherwise classified

None known

3. Composition/information on Ingredients

Substances	CAS Number	PERCENT (w/w)	GHS Classification - US
Light aliphatic solvent naphtha	64742-89-8	30 - 60%	Skin Irrit. 2 (H315) Muta. 1B (H340) Carc. 1B (H350) Repr. 2 (H361) STOT SE 3 (H336) Asp. Tox. 1 (H304) Aquatic Acute 2 (H401) Aquatic Chronic 4 (H413) Flam. Liq. 3 (H226)
Toluene	108-88-3	10 - 30%	Skin Irrit. 2 (H315) Eye Irrit. 2B (H320) Repr. 1B (H360) STOT SE 3 (H336) STOT RE 2 (H373) Asp. Tox. 1 (H304) Aquatic Acute 2 (H401) Aquatic Chronic 3 (H412) Flam. Liq. 2 (H225)
Xylene	1330-20-7	10 - 30%	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) STOT SE 3 (H335) Asp. Tox. 1 (H304) Aquatic Acute 2 (H401) Flam. Liq. 3 (H226)
Isopropanol	67-63-0	10 - 30%	Eye Irrit. 2 (H319) STOT SE 3 (H336) Flam. Liq. 2 (H225)
Ethylene glycol monobutyl ether	111-76-2	5 - 10%	Acute Tox. 4 (H302) Acute Tox. 4 (H332) Skin Irrit. 2 (H315) Eye Irrit. 2A (H319) Flam. Liq. 4 (H227)

The exact percentage (concentration) of the composition has been withheld as proprietary.

4. First-Aid Measures

4.1. Description of first aid measures

Inhalation	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Seek immediate medical attention/advice.
Eyes	Immediately flush eyes with large amounts of water for at least 15 minutes. Get immediate medical attention.
Skin	In case of contact, immediately flush skin with plenty of soap and water for at least 15 minutes. Get medical attention.
Ingestion	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Obtain immediate medical attention.

4.2 Most important symptoms/effects, acute and delayed

Aspiration into the lungs may cause chemical pneumonitis including coughing, difficulty breathing, wheezing, coughing up blood and pneumonia, which can be fatal. Causes skin irritation. Causes eye irritation May cause heritable genetic damage. Carcinogen. Potential reproductive hazard. May cause birth defects. May cause headache, dizziness, and other central nervous system effects. Prolonged or repeated exposure may cause damage to organs.

4.3. Indication of any immediate medical attention and special treatment needed

Notes to Physician	Aspiration may cause severe lung damage. Evacuate stomach in a way which avoids aspiration.

5. Fire-fighting measures

5.1. Extinguishing media

Suitable Extinguishing Media

Water fog, carbon dioxide, foam, dry chemical.

Extinguishing media which must not be used for safety reasons

Do NOT spray pool fires directly with water. A solid stream of water directed into hot burning liquid can cause splattering.

5.2 Specific hazards arising from the substance or mixture

Special exposure hazards in a fire

Decomposition in fire may produce harmful gases.

5.3 Special protective equipment and precautions for fire-fighters

Special protective equipment for firefighters

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

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use appropriate protective equipment. Do not breathe dust/fume/gas/mist/vapors/spray. Remove sources of ignition. Take precautionary measures against static discharges All equipment used when handling the product must be grounded Avoid contact with skin, eyes and clothing.
See Section 8 for additional information

6.2. Environmental precautions

Prevent from entering sewers, waterways, or low areas.

6.3. Methods and material for containment and cleaning up

Dike far ahead of liquid spill for later disposal. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. Remove ignition sources and work with non-sparking tools.

7. Handling and storage

7.1. Precautions for safe handling

Handling Precautions

Do not breathe dust/fume/gas/mist/vapors/spray. Ensure adequate ventilation. Use appropriate protective equipment.

Remove sources of ignition. Ground and bond containers when transferring from one container to another. Avoid contact with eyes, skin, or clothing.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage Information

Store in a cool well ventilated area. Keep from heat, sparks, and open flames.

8. Exposure Controls/Personal Protection

8.1 Occupational Exposure Limits

Substances	CAS Number	OSHA PEL-TWA	ACGIH TLV-TWA
Light aliphatic solvent naphtha	64742-89-8	Not applicable	Not applicable
Toluene	108-88-3	TWA: 200 ppm Ceiling: 300 ppm	TWA: 20 ppm
Xylene	1330-20-7	100 ppm	TWA: 100 ppm STEL: 150 ppm
Isopropanol	67-63-0	TWA: 400 ppm	TWA: 200 ppm STEL: 400 ppm
Ethylene glycol monobutyl ether	111-76-2	TWA: 50 ppm Skin	TWA: 20 ppm Skin

8.2 Appropriate engineering controls

Engineering Controls Ensure adequate ventilation, especially in confined areas

8.3 Individual protection measures, such as personal protective equipment

Personal Protective Equipment If engineering controls and work practices cannot prevent excessive exposures, the selection and proper use of personal protective equipment should be determined by an industrial hygienist or other qualified professional based on the specific application of this product.

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.

Hand Protection Use gloves which are suitable for the chemicals present in this product as well as other environmental factors in the workplace.

Skin Protection Wear impervious protective clothing, including boots, gloves, lab coat, apron, rain jacket, pants or coverall, as appropriate, to prevent skin contact.

Eye Protection Safety glasses with side-shields. If splashes are likely to occur, wear: Goggles, Face-shield.

Other Precautions Eyewash fountains and safety showers must be easily accessible.

9. Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Physical State: Liquid

Color Clear to Slightly Hazy Light Amber to Dark Amber

Odor: Aromatic hydrocarbon

Odor Threshold: No information available

Property	Values	Remarks/ - Method
pH:	No data available	

Freezing Point / Range	-40 °C / -40 °F
Melting Point / Range	No data available
Boiling Point / Range	No data available
Flash Point	21.1 °C / 70 °F (SFCC)
Flammability (solid, gas)	No data available
Upper flammability limit	No data available
Lower flammability limit	No data available
Evaporation rate	No data available
Vapor Pressure	No data available
Vapor Density	No data available
Specific Gravity	0.8044 - 0.8294
Water Solubility	No data available
Solubility in other solvents	No data available
Partition coefficient: n-octanol/water	No data available
Autoignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	No data available
Explosive Properties	No information available
Oxidizing Properties	No information available

9.2. Other information

VOC Content (%)	No data available
Liquid Density	6.70-6.91 lbs/gal

10. Stability and Reactivity

10.1. Reactivity
Not expected to be reactive.

10.2. Chemical stability
Stable

10.3. Possibility of hazardous reactions
Will Not Occur

10.4. Conditions to avoid
Keep away from heat, sparks and flame.

10.5. Incompatible materials
Strong oxidizers. Strong acids. Strong alkalis.

10.6. Hazardous decomposition products
Carbon oxides. Fumes of aromatic hydrocarbons. Ethanol.

11. Toxicological Information

11.1 Information on likely routes of exposure

Principle Route of Exposure Inhalation. Eye contact. Skin contact. Ingestion.

11.2 Symptoms related to the physical, chemical and toxicological characteristics

Acute Toxicity

Inhalation	May cause central nervous system depression including headache, dizziness, drowsiness, incoordination, slowed reaction time, slurred speech, giddiness and unconsciousness.
Eye Contact	Causes serious eye irritation.
Skin Contact	Causes skin irritation.
Ingestion	May be fatal if swallowed and enters airways.

Chronic Effects/Carcinogenicity May cause heritable genetic damage. Contains known or suspected carcinogens. Prolonged or repeated exposure may cause reproductive system damage. May cause damage to organs through prolonged or repeated exposure.

11.3 Toxicity data

Toxicology data for the components

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Light aliphatic solvent naphtha	64742-89-8	> 5000 mg/kg bw (Rat)	> 2000 mg/kg (Rabbit)	> 5.6 mg/L (Rat) 4h
Toluene	108-88-3	5580 mg/kg (Rat)	12,000 mg/kg (Rat)	28.1 mg/L (Rat) 4h
Xylene	1330-20-7	3523 mg/kg (Rat)	> 4200 mg/kg (Rabbit)	27.6 mg/L (Rat) 4h
Isopropanol	67-63-0	4396 mg/kg (Rat) 5840 mg/kg (Rat) 3600 mg/kg (Mouse)	12,800 mg/kg (Rat) 12,870 mg/kg (Rabbit) 6280 mg/kg (Rabbit)	72.6 mg/L (Rat) 4h > 10,000 mg/L (Rat) 6h
Ethylene glycol monobutyl ether	111-76-2	1414 mg/kg-bw (guinea pig)	>2000 mg/kg (Rabbit)	No data available

Substances	CAS Number	Skin corrosion/irritation
Light aliphatic solvent naphtha	64742-89-8	Skin, rabbit: Causes moderate skin irritation.
Toluene	108-88-3	Skin, rabbit: Causes moderate skin irritation.
Xylene	1330-20-7	Causes skin irritation.
Isopropanol	67-63-0	Non-irritating to the skin (Rabbit)
Ethylene glycol monobutyl ether	111-76-2	Causes moderate skin irritation. (Rabbit) Skin, rabbit:

Substances	CAS Number	Serious eye damage/irritation
Light aliphatic solvent naphtha	64742-89-8	Non-irritating to rabbit's eye
Toluene	108-88-3	Causes moderate eye irritation
Xylene	1330-20-7	Causes moderate eye irritation (Rabbit)
Isopropanol	67-63-0	Causes moderate eye irritation (Rabbit)
Ethylene glycol monobutyl ether	111-76-2	Causes moderate eye irritation (Rabbit) Eye, rabbit:

Substances	CAS Number	Skin Sensitization
Light aliphatic solvent naphtha	64742-89-8	Did not cause sensitization on laboratory animals (guinea pig)
Toluene	108-88-3	Did not cause sensitization on laboratory animals (guinea pig)
Xylene	1330-20-7	Did not cause sensitization on laboratory animals (mouse)
Isopropanol	67-63-0	Did not cause sensitization on laboratory animals (guinea pig)
Ethylene glycol monobutyl ether	111-76-2	Did not cause sensitization on laboratory animals (guinea pig)

Substances	CAS Number	Respiratory Sensitization
Light aliphatic solvent naphtha	64742-89-8	No information available
Toluene	108-88-3	No information available
Xylene	1330-20-7	No information available
Isopropanol	67-63-0	No information available
Ethylene glycol monobutyl ether	111-76-2	No information available

Substances	CAS Number	Mutagenic Effects
Light aliphatic solvent naphtha	64742-89-8	Some in vivo tests have shown mutagenic effects. Some in vitro tests have shown mutagenic effects.
Toluene	108-88-3	The weight of evidence from available in vitro and in vivo studies indicates that this substance is not expected to be mutagenic.
Xylene	1330-20-7	In vitro tests did not show mutagenic effects In vivo tests did not show mutagenic effects.
Isopropanol	67-63-0	In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects.
Ethylene glycol monobutyl ether	111-76-2	In vivo tests did not show mutagenic effects. In vitro tests did not show mutagenic effects

Substances	CAS Number	Carcinogenic Effects
Light aliphatic solvent naphtha	64742-89-8	This substance is a potential carcinogen.
Toluene	108-88-3	No data of sufficient quality are available.
Xylene	1330-20-7	Did not show carcinogenic effects in animal experiments
Isopropanol	67-63-0	Did not show carcinogenic effects in animal experiments
Ethylene glycol monobutyl ether	111-76-2	Not regarded as carcinogenic.

Substances	CAS Number	Reproductive toxicity
Light aliphatic solvent naphtha	64742-89-8	May cause adverse reproductive effects - such as birth defect, miscarriages, or infertility
Toluene	108-88-3	Fetotoxic and teratogenic effects observed in experimental animals at concentrations that did not produce maternal toxicity.
Xylene	1330-20-7	Did not show teratogenic effects in animal experiments. Animal testing did not show any effects on fertility.
Isopropanol	67-63-0	No significant toxicity observed in animal studies at concentration requiring classification.
Ethylene glycol monobutyl ether	111-76-2	Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments.

Substances	CAS Number	STOT - single exposure
Light aliphatic solvent naphtha	64742-89-8	May cause disorder and damage to the Central Nervous System (CNS)
Toluene	108-88-3	May cause headache, dizziness, and other central nervous system effects.
Xylene	1330-20-7	May cause respiratory irritation.
Isopropanol	67-63-0	May cause headache, dizziness, and other central nervous system effects.
Ethylene glycol monobutyl ether	111-76-2	No data of sufficient quality are available.

Substances	CAS Number	STOT - repeated exposure
Light aliphatic solvent naphtha	64742-89-8	No significant toxicity observed in animal studies at concentration requiring classification.
Toluene	108-88-3	Causes damage to organs through prolonged or repeated exposure if inhaled: Central Nervous System (CNS)
Xylene	1330-20-7	No significant toxicity observed in animal studies at concentration requiring classification.
Isopropanol	67-63-0	No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)
Ethylene glycol monobutyl ether	111-76-2	No data of sufficient quality are available.

Substances	CAS Number	Aspiration hazard
Light aliphatic solvent naphtha	64742-89-8	Aspiration into the lungs may cause chemical pneumonitis including coughing, difficulty breathing, wheezing, coughing up blood and pneumonia, which can be fatal.
Toluene	108-88-3	Aspiration into the lungs may cause chemical pneumonitis including coughing, difficulty breathing, wheezing, coughing up blood and pneumonia, which can be fatal.
Xylene	1330-20-7	Aspiration into the lungs may cause chemical pneumonitis including coughing, difficulty breathing, wheezing, coughing up blood and pneumonia, which can be fatal.
Isopropanol	67-63-0	Not applicable
Ethylene glycol monobutyl ether	111-76-2	No adverse health effects are expected from swallowing. Not applicable

12. Ecological Information

12.1. Toxicity

Ecotoxicity effects

Toxic to aquatic life.

Product Ecotoxicity Data

No data available

Substance Ecotoxicity Data

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Light aliphatic solvent naphtha	64742-89-8	No information available	LL50 (96h) 8.2mg/L (Pimephales promelas)	No information available	NOELR (21d) 2.6 mg/L (Daphnia magna)

Toluene	108-88-3	EC50 (3h) 134 mg/L (Chlamydomonas angulosa) EC50 (72h) 12.5 mg/L (Selenastrum capricornutum)	LC50 (96h) 5.8 mg/L (Oncorhynchus mykiss) LC50 (96h) 5.5 mg/L (Oncorhynchus kisutch) NOEC (40d) 1.4 mg/L (Oncorhynchus kisutch)	IC50 (24h) 84 mg/L (Nitrosomonas sp.)	LC50 (48h) 3.78 mg/L (Ceriodaphnia dubia) EC50 (48h) 11.5 mg/L (Daphnia magna) NOEC (7d) 0.74 mg/L (Ceriodaphnia dubia) NOEC (21d) 1 mg/L (Daphnia magna)
Xylene	1330-20-7	No information available	NOEC (56d) > 1.3 mg/L (Oncorhynchus mykiss) LC50 (96h) 2.6 mg/L (Oncorhynchus mykiss)	No information available	No information available
Isopropanol	67-63-0	EC50 (72h) > 1000 mg/L (Desmodesmus subspicatus) EC50 (7d) 1800 mg/L (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) 13,299 mg/L (Daphnia magna) EC50 (24h) > 10,000 mg/L (Daphnia magna)
Ethylene glycol monobutyl ether	111-76-2	EC50 (72 h) =1840 mg/L (Pseudokirchneriella subcapitata)	LC50 (96 h) =1474 mg/L (Oncorhynchus mykiss) NOAEC (21 d) >100 mg/L (Danio rerio)	No information available	EC50 (48 h) =1800 mg/L (Daphnia magna) EC50 (21 d) =297 mg/L (Daphnia magna)

12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Light aliphatic solvent naphtha	64742-89-8	Readily biodegradable (77.05% @ 28d)
Toluene	108-88-3	Readily biodegradable
Xylene	1330-20-7	Readily biodegradable (87.8% @ 28d)
Isopropanol	67-63-0	Readily biodegradable (53% @ 5d)
Ethylene glycol monobutyl ether	111-76-2	Readily biodegradable (75-88% @ 28d)

12.3. Bioaccumulative potential

Substances	CAS Number	Log Pow
Light aliphatic solvent naphtha	64742-89-8	Log Kow > 3
Toluene	108-88-3	2.73
Xylene	1330-20-7	2.77 - 3.15 BCF = 25.9
Isopropanol	67-63-0	0.05
Ethylene glycol monobutyl ether	111-76-2	LogPow 0.81

12.4. Mobility in soil

Substances	CAS Number	Mobility
Light aliphatic solvent naphtha	64742-89-8	No information available
Toluene	108-88-3	No information available
Xylene	1330-20-7	KOC = 537
Isopropanol	67-63-0	KOC = 1.5
Ethylene glycol monobutyl ether	111-76-2	No information available

12.5 Other adverse effects

No information available

13. Disposal Considerations

13.1. Waste treatment methods

Disposal methods

Disposal should be made in accordance with federal, state, and local regulations.

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 Toluene, Isopropanol)
Transport Hazard Class(es)	3
Packing Group:	II
Environmental Hazards	Not applicable
NAERG:	NAERG 128

Canadian TDG

UN Number	UN1993
UN proper shipping name	Flammable Liquid, N.O.S. (Contains Toluene, Isopropanol)
Transport Hazard Class(es)	3
Packing Group:	II
Environmental Hazards	Not applicable

IMDG/IMO

UN Number	UN1993
UN proper shipping name	Flammable Liquid, N.O.S. (Contains Toluene, Isopropanol)
Transport Hazard Class(es)	3
Packing Group:	II
Environmental Hazards	Not applicable
EMS:	EmS F-E, S-E

IATA/ICAO

UN Number	UN1993
UN proper shipping name	Flammable Liquid, N.O.S. (Contains Toluene, Isopropanol)
Transport Hazard Class(es)	3
Packing Group:	II
Environmental Hazards	Not applicable

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

15. Regulatory Information

US Regulations

US TSCA Inventory All components listed on inventory or are exempt.

TSCA Significant New Use Rules - S5A2

Substances	CAS Number	TSCA Significant New Use Rules - S5A2
Light aliphatic solvent naphtha	64742-89-8	Not applicable
Toluene	108-88-3	Not applicable
Xylene	1330-20-7	Not applicable
Isopropanol	67-63-0	Not applicable
Ethylene glycol monobutyl ether	111-76-2	Not applicable

EPA SARA Title III Extremely Hazardous Substances

Substances	CAS Number	EPA SARA Title III Extremely Hazardous Substances
Light aliphatic solvent naphtha	64742-89-8	Not applicable
Toluene	108-88-3	Not applicable
Xylene	1330-20-7	Not applicable
Isopropanol	67-63-0	Not applicable

Ethylene glycol monobutyl ether	111-76-2	Not applicable

EPA SARA (311,312) Hazard Class

Acute Health Hazard
Chronic Health Hazard
Fire Hazard

EPA SARA (313) Chemicals

Substances	CAS Number	Toxic Release Inventory (TRI) - Group I	Toxic Release Inventory (TRI) - Group II
Light aliphatic solvent naphtha	64742-89-8	Not applicable	Not applicable
Toluene	108-88-3	1.0%	>= 1.0 %
Xylene	1330-20-7	1.0%	Not applicable
Isopropanol	67-63-0	1.0%	Not applicable
Ethylene glycol monobutyl ether	111-76-2	1.0%	Not applicable

EPA CERCLA/Superfund Reportable Spill Quantity

Substances	CAS Number	CERCLA RQ
Light aliphatic solvent naphtha	64742-89-8	Not applicable
Toluene	108-88-3	1000 lb 454 kg 1 lb 0.454 kg
Xylene	1330-20-7	100 lb 45.4 kg
Isopropanol	67-63-0	Not applicable
Ethylene glycol monobutyl ether	111-76-2	Not applicable

EPA RCRA Hazardous Waste Classification

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.

NFPA Ratings: Health 2, Flammability 3, Reactivity 0
HMIS Ratings: Health 2*, Flammability 3, Physical Hazard 0 , PPE: X

Canadian Regulations

Canadian Domestic Substances List (DSL) All components listed on inventory or are exempt.

16. Other information

Preparation Information

Prepared By Chemical Stewardship
Telephone: 1-281-871-6107
e-mail: fdunexchem@halliburton.com

Revision Date: 15-Mar-2016

Reason for Revision Update to Format

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 Stewardship at 1-580-251-4335.

Key or legend to abbreviations and acronyms used in the safety data sheet

bw – body weight
CAS – Chemical Abstracts Service
EC50 – Effective Concentration 50%
ErC50 – Effective Concentration growth rate 50%
LC50 – Lethal Concentration 50%
LD50 – Lethal Dose 50%
LL50 – Lethal Loading 50%
mg/kg – milligram/kilogram
mg/L – milligram/liter
NIOSH – National Institute for Occupational Safety and Health
NTP – National Toxicology Program
OEL – Occupational Exposure Limit
PEL – Permissible Exposure Limit
ppm – parts per million
STEL – Short Term Exposure Limit
TWA – Time-Weighted Average
UN – United Nations
h - hour
mg/m^3 - milligram/cubic meter
mm - millimeter
mmHg - millimeter mercury
w/w - weight/weight
d - day

Key literature references and sources for data

OSHA
ECHA C&L
www.ChemADVISOR.com/

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End of Safety Data Sheet