

SAFETY DATA SHEET

Product Trade Name:

Sample G

Revision Date: 04-Oct-2019

Revision Number: 3

1. Identification

1.1. Product Identifier

Product Trade Name: Sample G
Synonyms: None
Chemical Family: Blend
Internal ID Code: 000048

1.2 Recommended use and restrictions on use

Application: Non-ionic Surfactant
Uses advised against: No information available

1.3 Manufacturer's Name and Contact Details

Halliburton Group Canada
645 - 7th Ave SW Suite 1800
Calgary, AB, T2P 4G8, Canada
Telephone: 1-403-231-9300

Manufacturer/Supplier

Halliburton Energy Services, Inc.
P.O. Box 1431
Duncan, Oklahoma 73536-0431
Telephone: 1-281-871-6107

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 (accessible 24 hours a day / 7 days a week)
Global Incident Response Access Code: 334305
Contract Number: 14012

2. Hazard Identification

2.1 Classification of the substance or mixture

Serious Eye Damage/Irritation	Category 1 - H318
Carcinogenicity	Category 2 - H351
Specific Target Organ Toxicity - (Single Exposure)	Category 2 - H371
Acute Aquatic Toxicity	Category 2 - H401
Chronic Aquatic Toxicity	Category 2 - H411
Flammable liquids.	Category 2 - H225

2.2. Label Elements

Hazard Pictograms



Signal Word:	Danger
Hazard Statements	<p>H225 - Highly flammable liquid and vapor H318 - Causes serious eye damage H351 - Suspected of causing cancer H371 - May cause damage to organs H401 - Toxic to aquatic life H411 - Toxic to aquatic life with long lasting effects</p>
Precautionary Statements	
Prevention	<p>P201 - Obtain special instructions before use P202 - Do not handle until all safety precautions have been read and understood P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P233 - Keep container tightly closed P240 - Ground and bond container and receiving equipment. P241 - Use explosion-proof electrical/ventilating/lighting/equipment P242 - Use only non-sparking tools P243 - Take action to prevent static discharges. P260 - Do not breathe dust/fume/gas/mist/vapors/spray P264 - Wash face, hands and any exposed skin thoroughly after handling P270 - Do not eat, drink or smoke when using this product P273 - Avoid release to the environment P280 - Wear protective gloves/protective clothing/eye protection/face protection</p>
Response	<p>P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician P331 - Do NOT induce vomiting P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P310 - Immediately call a POISON CENTER or doctor/physician P308 + P313 - IF exposed or concerned: Get medical advice/attention P370 + P378 - In case of fire: Use water spray for extinction P391 - Collect spillage</p>
Storage	<p>P403 + P235 - Store in a well-ventilated place. Keep cool P405 - Store locked up</p>
Disposal	<p>P501 - Dispose of contents/container in accordance with local/regional/national/international regulations</p>

2.3 Other hazards which do not result in classification

None known

3. Composition/information on Ingredients

Substances	CAS Number	PERCENT (w/w)	GHS Classification - Canada	HMIRA Registry Number	Filing Date	Decision Granted Date
Ethanol	64-17-5	30 - 60%	Eye Irrit. 2A (H319) Flam. Liq. 2 (H225)	Not applicable	Not applicable	Not applicable
Heavy aromatic petroleum naphtha	64742-94-5	10 - 30%	Asp. Tox. 1 (H304) Aquatic Acute 2 (H401) Aquatic Chronic 2 (H411)	Not applicable	Not applicable	Not applicable
Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-, branched	127087-87-0	1 - 5%	Skin Irrit. 2 (H315) Eye Corr. 1 (H318) STOT SE 2 (H371) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	Not applicable	Not applicable	Not applicable
Naphthalene	91-20-3	1 - 5%	Acute Tox. 4 (H302) Carc. 2 (H351) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) Flam. Sol. 2 (H228)	Not applicable	Not applicable	Not applicable

Substances	Common Name	CAS Number
Heavy aromatic petroleum naphtha	solvent naphtha	64742-94-5

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

4. First aid measures

4.1. Description of first aid measures

Inhalation	If inhaled, move victim to fresh air and seek medical attention.
Eyes	Immediately flush eyes with large amounts of water for at least 30 minutes. Seek prompt medical attention.
Skin	Wash off immediately with soap and plenty of water for at least 15 minutes while removing all contaminated clothing and shoes. Get medical attention if irritation persists.
Ingestion	Do NOT induce vomiting. Give nothing by mouth. Obtain immediate medical attention.

4.2 Most important symptoms/effects, acute and delayed

Causes severe eye irritation which may damage tissue. Causes mild skin irritation. Potential carcinogen.

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

Notes to Physician Treat symptomatically.

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

None known.

5.2 Specific hazards arising from the substance or mixture

Special exposure hazards in a fire

Use water spray to cool fire exposed surfaces. Closed containers may explode in 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**

Use appropriate protective equipment. Wear self-contained breathing apparatus in enclosed areas. 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

Remove ignition sources and work with non-sparking tools. Isolate spill and stop leak where safe. Contain spill with sand or other inert materials. Scoop up and remove.

7. Handling and Storage**7.1. Precautions for safe handling****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.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities**Storage Information**

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

8. Exposure Controls/Personal Protection**8.1 Occupational Exposure Limits**

Substances	CAS Number	OSHA PEL-TWA	ACGIH TLV-TWA
Ethanol	64-17-5	TWA: 1000 ppm TWA: 1900 mg/m ³	STEL: 1000 ppm
Heavy aromatic petroleum naphtha	64742-94-5	Not applicable	Not applicable
Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-, branched	127087-87-0	Not applicable	Not applicable
Naphthalene	91-20-3	TWA: 10 ppm TWA: 50 mg/m ³	TWA: 10 ppm

8.2 Appropriate engineering controls**Engineering Controls**

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

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. Organic vapor respirator.
Hand Protection	Butyl rubber gloves. Neoprene 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

9.1. Information on basic physical and chemical properties

Physical State: Liquid	Color	Amber
Odor: Alcohol	Odor	No information available
	Threshold:	

<u>Property</u>	<u>Values</u>
Remarks/ - Method	
pH:	7
Freezing Point / Range	-60.51 °C / -76.9 °F
Melting Point / Range	No data available
Pour Point / Range	No data available
Boiling Point / Range	78.4 °C / 173.1 °F
Flash Point	13 °C / 55.3 °F (PMCC)
Flammability (solid, gas)	No data available
Upper flammability limit	19%
Lower flammability limit	3.3%
Evaporation rate	No data available
Vapor Pressure	No data available
Vapor Density	No data available
Specific Gravity	0.911
Water Solubility	Soluble in water
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
------------------------	-------------------

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.

10.6. Hazardous decomposition products

Oxides of nitrogen. Carbon monoxide and carbon dioxide.

11. Toxicological Information**11.1 Information on likely routes of exposure**

Principle Route of Exposure Eye or skin contact, inhalation.

11.2 Symptoms related to the physical, chemical and toxicological characteristics**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

Causes severe eye irritation which may damage tissue.

Skin Contact

Causes mild skin irritation.

Ingestion

Irritation of the mouth, throat, and stomach. May cause abdominal pain, vomiting, nausea, and diarrhea.

Chronic Effects/Carcinogenicity The International Agency for Research on Cancer (IARC) has evaluated naphthalene and determined it to be a possible carcinogen to humans (Group 2B, based on sufficient evidence in experimental animals and inadequate evidence in humans).

11.3 Toxicity data**Toxicology data for the components**

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Ethanol	64-17-5	7060 mg/kg (Rat) 10,470 mg/kg (Rat)	> 15,800 mg/kg (Rabbit) 17,100 mg/kg (Rabbit)	124.7 mg/L (Rat) 4h
Heavy aromatic petroleum naphtha	64742-94-5	>5000 mg/kg-bw (rat)	>1800 mg/kg-bw (rabbit)	> 4.778 mg/L (rat, 4 h, vapour, saturated)
Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-, branched	127087-87-0	2000 - 5000 mg/kg (Rat) (Similar substance)	> 2000 mg/kg (Rabbit) (similar substance)	No data available
Naphthalene	91-20-3	490 mg/kg (Rat) 1110 mg/kg (Rat)	1120 mg/kg (Rabbit) 20 g/kg (Rabbit)	340 mg/m ³ (Rat) 1 h

Substances	CAS Number	Skin corrosion/irritation
Ethanol	64-17-5	Not irritating to skin in rabbits.
Heavy aromatic petroleum naphtha	64742-94-5	Non-irritating to the skin (Rabbit) (similar substances)
Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-, branched	127087-87-0	Causes moderate skin irritation. (Rabbit)
Naphthalene	91-20-3	Non-irritating to the skin (Rabbit)

Substances	CAS Number	Serious eye damage/irritation
Ethanol	64-17-5	Causes moderate eye irritation (Rabbit)
Heavy aromatic petroleum naphtha	64742-94-5	Non-irritating to rabbit's eye (similar substances)
Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-, branched	127087-87-0	Causes severe eye irritation which may damage tissue. (Rabbit)
Naphthalene	91-20-3	May cause mechanical irritation to eye. (human) Non-irritating to rabbit's eye

Substances	CAS Number	Skin Sensitization
Ethanol	64-17-5	Did not cause sensitization on laboratory animals
Heavy aromatic petroleum naphtha	64742-94-5	Patch test on human volunteers did not demonstrate sensitization properties Did not cause sensitization on laboratory animals (guinea pig) (similar substances)
Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omeg a-hydroxy-, branched	127087-87-0	Patch test on human volunteers did not demonstrate sensitization properties
Naphthalene	91-20-3	Did not cause sensitization on laboratory animals (guinea pig)

Substances	CAS Number	Respiratory Sensitization
Ethanol	64-17-5	Did not cause sensitization on laboratory animals
Heavy aromatic petroleum naphtha	64742-94-5	No information available
Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omeg a-hydroxy-, branched	127087-87-0	No information available
Naphthalene	91-20-3	No information available

Substances	CAS Number	Mutagenic Effects
Ethanol	64-17-5	Not regarded as mutagenic.
Heavy aromatic petroleum naphtha	64742-94-5	In vitro tests did not show mutagenic effects In vivo tests did not show mutagenic effects. (similar substances)
Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omeg a-hydroxy-, branched	127087-87-0	In vitro tests did not show mutagenic effects (similar substances)
Naphthalene	91-20-3	In vitro tests did not show mutagenic effects.

Substances	CAS Number	Carcinogenic Effects
Ethanol	64-17-5	Did not show carcinogenic effects in animal experiments
Heavy aromatic petroleum naphtha	64742-94-5	Did not show carcinogenic effects in animal experiments (similar substances) Not regarded as carcinogenic.
Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omeg a-hydroxy-, branched	127087-87-0	Did not show carcinogenic or teratogenic effects in animal experiments (similar substances)
Naphthalene	91-20-3	Substances which should be regarded as if they are carcinogenic to man

Substances	CAS Number	Reproductive toxicity
Ethanol	64-17-5	Animal testing did not show any effects on fertility.
Heavy aromatic petroleum naphtha	64742-94-5	Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments. (similar substances)
Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omeg a-hydroxy-, branched	127087-87-0	Not a confirmed teratogen or embryotoxin. (similar substances)
Naphthalene	91-20-3	Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments.

Substances	CAS Number	STOT - single exposure
Ethanol	64-17-5	No significant toxicity observed in animal studies at concentration requiring classification.
Heavy aromatic petroleum naphtha	64742-94-5	May cause headache, dizziness, and other central nervous system effects.
Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omeg a-hydroxy-, branched	127087-87-0	May cause disorder and damage to the Central Nervous System (CNS)
Naphthalene	91-20-3	No data of sufficient quality are available.

Substances	CAS Number	STOT - repeated exposure
Ethanol	64-17-5	No significant toxicity observed in animal studies at concentration requiring classification.
Heavy aromatic petroleum naphtha	64742-94-5	No significant toxicity observed in animal studies at concentration requiring classification.
Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omeg a-hydroxy-, branched	127087-87-0	No significant toxicity observed in animal studies at concentration requiring classification.
Naphthalene	91-20-3	No significant toxicity observed in animal studies at concentration requiring classification.

Substances	CAS Number	Aspiration hazard
Ethanol	64-17-5	Not applicable

Heavy aromatic petroleum naphtha	64742-94-5	Aspiration into the lungs may cause chemical pneumonitis including coughing, difficulty breathing, wheezing, coughing up blood and pneumonia, which can be fatal.
Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-, branched	127087-87-0	Not applicable
Naphthalene	91-20-3	No information available

12. Ecological Information

12.1. Toxicity

Product Ecotoxicity Data

Product is not classified as hazardous to the environment.

Substance Ecotoxicity Data

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Ethanol	64-17-5	No information available	LC50 > 100 mg/L (Pimephales promelas)	No information available	LC50 9268 - 14,221 mg/L (Daphnia magna) LC50 5012 mg/L (Ceriodaphnia dubia) NOEC 9.6 mg/L (Daphnia magna)
Heavy aromatic petroleum naphtha	64742-94-5	EC50 (72h) 7.8 mg/L (Pseudokirchneriella subcapitata)	LL50 (96 h) =3.6 mg/L (Orcorhynchus mykiss) LC50 (96 h) =357.7 mg/L (Scophthalmus maximus)	No information available	EL50 (48h) 1.1 mg/L (Daphnia magna) (similar substance)
Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-, branched	127087-87-0	EC50 (72h) > 3 mg/L (Pseudokirchneriella subcapitata) (similar substance)	LC50 (96h) 0.323 mg/L (Pimephales promelas) (similar substance)	EC50 (3h) 104 mg/L (Activated sludge) (similar substance)	LC50 (48h) 0.148 mg/L (Daphnia magna) (similar substance) NOEC (21d) 0.1 mg/L (Daphnia magna) (similar substance)
Naphthalene	91-20-3	EC50 (72 h) =0.4 mg/L (Skeletonema costatum)	LC50 (96 h) =1.6 mg/L (Oncorhynchus mykiss) NOAEC (40 d) =0.37 mg/L (Oncorhynchus kisutch)	IC50 (24 h) =29 mg/L (Nitrosomonas sp.)	EC50 (48 h) =2.16 mg/L (Daphnia magna) NOAEC (125 d) =0.59 mg/L (Daphnia pulex)

12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Ethanol	64-17-5	No information available
Heavy aromatic petroleum naphtha	64742-94-5	Readily biodegradable (58% @ 28d)
Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-, branched	127087-87-0	Readily biodegradable (81% @ 28d) (similar substances)
Naphthalene	91-20-3	Readily biodegradable (100% @ 7d)

12.3. Bioaccumulative potential

Substances	CAS Number	Bioaccumulation
Ethanol	64-17-5	-0.32
Heavy aromatic petroleum naphtha	64742-94-5	LogPow 5.2
Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-, branched	127087-87-0	3.59-4.24
Naphthalene	91-20-3	LogPow 3.3

12.4. Mobility in soil

Substances	CAS Number	Mobility
Ethanol	64-17-5	No information available
Heavy aromatic petroleum naphtha	64742-94-5	No information available
Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-, branched	127087-87-0	No information available

Naphthalene	91-20-3	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.**14. Transport Information****Canadian TDG**

UN Number UN1993
UN proper shipping name: Flammable Liquid, N.O.S. (Contains Ethanol, Heavy Aromatic Naphtha)
Transport Hazard Class(es): 3,
Packing Group: II
Environmental Hazards: Marine Pollutant (Naphthalene, Nonylphenol)

US DOT

UN Number UN1993
UN proper shipping name: Flammable Liquid, N.O.S. (Contains Ethanol, Heavy Aromatic Naphtha)
Transport Hazard Class(es): 3,
Packing Group: II
Environmental Hazards: Marine Pollutant (Naphthalene, Nonylphenol)
NAERG: NAERG 128

IMDG/IMO

UN Number UN1993
UN proper shipping name: Flammable Liquid, N.O.S. (Contains Ethanol, Heavy Aromatic Naphtha)
Transport Hazard Class(es): 3,
Packing Group: II
Environmental Hazards: Marine Pollutant (Naphthalene, Nonylphenol)
EMS: EmS F-E, S-E

IATA/ICAO

UN Number UN1993
UN proper shipping name: Flammable Liquid, N.O.S. (Contains Ethanol, Heavy Aromatic Naphtha)
Transport Hazard Class(es): 3,
Packing Group: II
Environmental Hazards: Marine Pollutant (Naphthalene, Nonylphenol)

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****Canadian Regulations**

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

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
Ethanol	64-17-5	Not applicable
Heavy aromatic petroleum naphtha	64742-94-5	Not applicable
Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-, branched	127087-87-0	Not applicable
Naphthalene	91-20-3	Not applicable

EPA SARA Title III Extremely Hazardous Substances

Substances	CAS Number	EPA SARA Title III Extremely Hazardous Substances
Ethanol	64-17-5	Not applicable
Heavy aromatic petroleum naphtha	64742-94-5	Not applicable
Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-, branched	127087-87-0	Not applicable
Naphthalene	91-20-3	Not applicable

EPA SARA (311,312) Hazard Class

Flammable (gases, aerosols, liquids, or solids)

Serious eye damage or eye irritation

Specific target organ toxicity (single or repeated exposure)

Carcinogenicity

EPA SARA (313) Chemicals

Substances	CAS Number	Toxic Release Inventory (TRI) - Group I	Toxic Release Inventory (TRI) - Group II
Ethanol	64-17-5	Not applicable	Not applicable
Heavy aromatic petroleum naphtha	64742-94-5	Not applicable	Not applicable
Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-, branched	127087-87-0	1.0%	Not applicable
Naphthalene	91-20-3	0.1%	Not applicable

EPA CERCLA/Superfund Reportable Spill Quantity

Substances	CAS Number	CERCLA RQ
Ethanol	64-17-5	Not applicable
Heavy aromatic petroleum naphtha	64742-94-5	Not applicable
Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-, branched	127087-87-0	Not applicable
Naphthalene	91-20-3	100 lb 45.4 kg 1 lb 0.454 kg

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

16. Other information**Preparation Information****Prepared By**

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

Revision Date:

04-Oct-2019

Reason for Revision

SDS sections updated:
2

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/m³ - milligram/cubic meter

mm - millimeter

mmHg - millimeter mercury

w/w - weight/weight

d - day

Key literature references and sources for data

www.ChemADVISOR.com/

NZ CCID

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 Safety Data Sheet