

SAFETY DATA SHEET

Product Trade Name: SC-1

Revision Date: 05-Jun-2017

Revision Number: 5

1. Identification

1.1. Product Identifier

Product Trade Name: SC-1
Synonyms: None
Chemical Family: Blend
Internal ID Code: 000044

1.2 Recommended use and restrictions on use

Application: Scale Inhibitor
Uses advised against: No information available

1.3 Manufacturer's Name and Contact Details

Manufacturer/Supplier

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

Halliburton Energy Services, Inc.
645 - 7th Ave SW Suite 1800
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
Global Incident Response Access Code: 334305
Contract Number: 14012

2. Hazards Identification

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

Acute inhalation toxicity - vapor	Category 4 - H332
Skin Corrosion / Irritation	Category 2 - H315
Serious Eye Damage/Irritation	Category 1 - H318
Specific Target Organ Toxicity - (Repeated Exposure)	Category 2 - H373
Acute Aquatic Toxicity	Category 1 - H400
Chronic Aquatic Toxicity	Category 2 - H411

2.2. Label Elements

Hazard Pictograms

**Signal Word:**

Danger

Hazard Statements

H315 - Causes skin irritation
 H318 - Causes serious eye damage
 H332 - Harmful if inhaled
 H373 - May cause damage to organs through prolonged or repeated exposure
 H400 - Very toxic to aquatic life
 H411 - Toxic to aquatic life with long lasting effects

Precautionary Statements**Prevention**

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

Response

P280 - Wear protective gloves/eye protection/face protection
 P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
 P332 + P313 - If skin irritation occurs: Get medical advice/attention
 P362 + P364 - 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
 P312 - Call a POISON CENTER or doctor/physician if you feel unwell
 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
 P391 - Collect spillage

Storage

None

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
Ethylene glycol	107-21-1	5 - 10%	Acute Tox. 4 (H302) STOT RE 1 (H372)
Ammonium, benzyldimethyldodecyl-, chloride	139-07-1	1 - 5%	Acute Tox. 4 (H302) Acute Tox. 3 (H311) Acute Tox. 2 (H330) Skin Corr. 1B (H314) Eye Corr. 1 (H318) STOT SE 3 (H335) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)
Benzenemethanaminium, N-hexadecyl-N,N-dimethyl-, chloride	122-18-9	1 - 5%	Acute Tox. 4 (H302) Acute Tox. 3 (H311) Acute Tox. 2 (H330) Skin Corr. 1B (H314)

			Eye Corr. 1 (H318) STOT SE 3 (H335) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)
Benzenemethanaminium, n,n-dimethyl-n-tetradecyl-, chloride	139-08-2	1 - 5%	Acute Tox. 4 (H302) Acute Tox. 3 (H311) Acute Tox. 2 (H330) Skin Corr. 1B (H314) Eye Corr. 1 (H318) STOT SE 3 (H335) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)

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	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. 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 skin irritation. Harmful if inhaled. May cause damage to organs through prolonged or repeated exposure.

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

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. Avoid contact with skin, eyes and clothing. Avoid breathing vapors. Ensure adequate ventilation.

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

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**

Use appropriate protective equipment. Avoid contact with eyes, skin, or clothing. Avoid breathing vapors. Ensure adequate ventilation. Wash hands after use. Launder contaminated clothing before reuse.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

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

Store away from oxidizers. Store in a cool 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**8.1 Occupational Exposure Limits**

Substances	CAS Number	OSHA PEL-TWA	ACGIH TLV-TWA
Ethylene glycol	107-21-1	Not applicable	Not applicable
Ammonium, benzyldimethyldodecyl-, chloride	139-07-1	Not applicable	Not applicable
Benzenemethanaminium, N-hexadecyl-N,N-dimethyl-, chloride	122-18-9	Not applicable	Not applicable
Benzenemethanaminium, n,n-dimethyl-n-tetradecyl-, chloride	139-08-2	Not applicable	Not applicable

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

Organic vapor respirator.

Hand Protection

Impervious rubber gloves. Nitrile gloves. Use Viton or 4H 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	Clear dark red
Odor: Amine	Odor	No information available
	Threshold:	

<u>Property</u>	<u>Values</u>
<u>Remarks/ - Method</u>	
pH:	5.5-6.5
Freezing Point / Range	No data available
Melting Point / Range	No data available
Boiling Point / Range	No data available
Flash Point	No data available
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	18.3
Vapor Density	No data available
Specific Gravity	1.034 - 1.046
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
<u>9.2. Other information</u>	
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

None anticipated

10.5. Incompatible materials

Strong oxidizers.

10.6. Hazardous decomposition products

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
Eye Contact
Skin Contact
Ingestion

Harmful if inhaled. May cause respiratory irritation.
 Causes severe eye irritation which may damage tissue.
 Causes skin irritation. May cause skin defatting with prolonged exposure.
 May cause abdominal pain, vomiting, nausea, and diarrhea.

Chronic Effects/Carcinogenicity Prolonged or repeated exposure can cause delayed kidney damage.

11.3 Toxicity data

Toxicology data for the components

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Ethylene glycol	107-21-1	4000 mg/kg (Rat) 7712 mg/kg (Rat) > 10000 mg/kg (Rat) 1670 mg/kg (Cat) 1400 – 1600 mg/kg (Human)	9530 µL/kg (Rabbit) > 3500 mg/kg (Mouse)	> 2.5 mg/L (Rat) 6h (saturated concentration)
Ammonium, benzyldimethyldodecyl-, chloride	139-07-1	500 - 1000 mg/kg (Rat)	930 mg/kg (Rat) (similar substance)	0.054 - 0.51 mg/L (Rat) (similar substance)
Benzenemethanaminium, N-hexadecyl-N,N-dimethyl-, chloride	122-18-9	304.5 mg/L (Rat) (similar substance)	930 mg/kg (Rat) (similar substance)	0.25 mg/L (rat, 4 hr, mist)(similar substance))
Benzenemethanaminium, n,n-dimethyl-n-tetradecyl-, chloride	139-08-2	304.5 mg/kg (Rat) (similar substance)	930 mg/kg (Rat) (similar substance)	0.25 mg/L (rat, 4 hr, mist)(similar substance)

Substances	CAS Number	Skin corrosion/irritation
Ethylene glycol	107-21-1	Non-irritating to the skin (Rabbit)
Ammonium, benzyldimethyldodecyl-, chloride	139-07-1	Causes severe skin irritation with tissue destruction. (Rabbit) (similar substances)
Benzenemethanaminium, N-hexadecyl-N,N-dimethyl-, chloride	122-18-9	Skin, rabbit: Causes burns (similar substances)
Benzenemethanaminium, n,n-dimethyl-n-tetradecyl-, chloride	139-08-2	Skin, rabbit: Causes burns (similar substances)

Substances	CAS Number	Serious eye damage/irritation
Ethylene glycol	107-21-1	Non-irritating to the eye (Rabbit)
Ammonium, benzyldimethyldodecyl-, chloride	139-07-1	Causes severe eye irritation. Will damage tissue. (Rabbit) (similar substances)
Benzenemethanaminium, N-hexadecyl-N,N-dimethyl-, chloride	122-18-9	Eye, rabbit: Causes severe eye irritation which may damage tissue. (similar substances)
Benzenemethanaminium, n,n-dimethyl-n-tetradecyl-, chloride	139-08-2	Eye, rabbit: Causes severe eye irritation which may damage tissue. (similar substances)

Substances	CAS Number	Skin Sensitization
Ethylene glycol	107-21-1	Did not cause sensitization on laboratory animals (guinea pig) Patch test on human volunteers did not demonstrate sensitization properties
Ammonium, benzyldimethyldodecyl-, chloride	139-07-1	Patch test on human volunteers did not demonstrate sensitization properties Did not cause sensitization on laboratory animals (guinea pig) (similar substances)
Benzenemethanaminium, N-hexadecyl-N,N-dimethyl-, chloride	122-18-9	Did not cause sensitization on laboratory animals (guinea pig) (similar substances)
Benzenemethanaminium, n,n-dimethyl-n-tetradecyl-, chloride	139-08-2	Did not cause sensitization on laboratory animals (guinea pig) (similar substances)

Substances	CAS Number	Respiratory Sensitization
------------	------------	---------------------------

Ethylene glycol	107-21-1	No information available
Ammonium, benzyldimethyldodecyl-, chloride	139-07-1	No data of sufficient quality are available.
Benzenemethanaminium, N-hexadecyl-N,N-dimethyl-, chloride	122-18-9	No information available
Benzenemethanaminium, n,n-dimethyl-n-tetradecyl-, chloride	139-08-2	No information available

Substances	CAS Number	Mutagenic Effects
Ethylene glycol	107-21-1	In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects.
Ammonium, benzyldimethyldodecyl-, chloride	139-07-1	In vitro tests did not show mutagenic effects In vivo tests did not show mutagenic effects.
Benzenemethanaminium, N-hexadecyl-N,N-dimethyl-, chloride	122-18-9	In vitro tests did not show mutagenic effects (similar substances)
Benzenemethanaminium, n,n-dimethyl-n-tetradecyl-, chloride	139-08-2	In vitro tests did not show mutagenic effects (similar substances)

Substances	CAS Number	Carcinogenic Effects
Ethylene glycol	107-21-1	Did not show carcinogenic effects in animal experiments
Ammonium, benzyldimethyldodecyl-, chloride	139-07-1	No information available
Benzenemethanaminium, N-hexadecyl-N,N-dimethyl-, chloride	122-18-9	Did not show carcinogenic effects in animal experiments (similar substances)
Benzenemethanaminium, n,n-dimethyl-n-tetradecyl-, chloride	139-08-2	Did not show carcinogenic effects in animal experiments (similar substances)

Substances	CAS Number	Reproductive toxicity
Ethylene glycol	107-21-1	Fetotoxic and teratogenic effects observed in experimental animals at concentrations that did not produce maternal toxicity.
Ammonium, benzyldimethyldodecyl-, chloride	139-07-1	Did not show teratogenic effects in animal experiments.
Benzenemethanaminium, N-hexadecyl-N,N-dimethyl-, chloride	122-18-9	Did not show teratogenic effects in animal experiments. Animal testing did not show any effects on fertility. (similar substances)
Benzenemethanaminium, n,n-dimethyl-n-tetradecyl-, chloride	139-08-2	Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments. (similar substances)

Substances	CAS Number	STOT - single exposure
Ethylene glycol	107-21-1	No significant toxicity observed in animal studies at concentration requiring classification.
Ammonium, benzyldimethyldodecyl-, chloride	139-07-1	May cause respiratory irritation.
Benzenemethanaminium, N-hexadecyl-N,N-dimethyl-, chloride	122-18-9	May cause respiratory irritation.
Benzenemethanaminium, n,n-dimethyl-n-tetradecyl-, chloride	139-08-2	May cause respiratory irritation.

Substances	CAS Number	STOT - repeated exposure
Ethylene glycol	107-21-1	Causes damage to organs through prolonged or repeated exposure: Kidney
Ammonium, benzyldimethyldodecyl-, chloride	139-07-1	No data of sufficient quality are available.
Benzenemethanaminium, N-hexadecyl-N,N-dimethyl-, chloride	122-18-9	No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)

Benzenemethanaminium, n,n-dimethyl-n-tetradecyl-, chloride	139-08-2	No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)
--	----------	--

Substances	CAS Number	Aspiration hazard
Ethylene glycol	107-21-1	Not applicable
Ammonium, benzyldimethyldodecyl-, chloride	139-07-1	Not applicable
Benzenemethanaminium, N-hexadecyl-N,N-dimethyl-, chloride	122-18-9	Not applicable
Benzenemethanaminium, n,n-dimethyl-n-tetradecyl-, chloride	139-08-2	Not applicable

12. Ecological Information

12.1. Toxicity

Ecotoxicity effects

Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Substance Ecotoxicity Data

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Ethylene glycol	107-21-1	EC50 6500 - 13000 mg/L (Pseudokirchneriella subcapitata) TGK (8d) > 10000 mg/L (Scenedesmus quadricauda) EC50 (72h) 6500 mg/L (Selenastrum capricornatum)	LC50 41000 mg/L (Oncorhynchus mykiss) LC50 (96h) 72860 mg/L (Pimephales promelas) LC50 (96h) 8050 mg/L (Selenastrum capricornatum) NOEC (7d) 15380 mg/L (mortality) (Pimephales promelas)	TTC (16h) > 10000 mg/L (Pseudomonas putida) EC20 (30 m) > 1995 mg/L (activated sludge, domestic) (similar substance)	EC50 46300 mg/L (Daphnia magna) EC50 (48 h) 7170 mg/L (Daphnia magna) NOEC (7d) 8590 mg/L (reproduction) (Ceriodaphnia dubia)
Ammonium, benzyldimethyldodecyl-, chloride	139-07-1	No information available	LC50 (96h) 0.28 mg/L (Pimephales promelas) (similar substance) LC50 (96h) 0.515 mg/L (Lepomis macrochirus) (similar substance) NOEC (28d) 0.032 mg/L (Pimephales promelas) (similar substance)	No information available	EC50 (48h) 0.0059 mg/L (Daphnia magna) (similar substance) EC50 (48h) 0.092 mg/L (Mysidosis Bahia) (similar substance) NOEC (34d) 0.032 mg/L (Daphnia magna) (similar substance)
Benzenemethanaminium, N-hexadecyl-N,N-dimethyl-, chloride	122-18-9	EC50 (72h) 0.049 mg/L (Pseudokirchneriella subcapitata) (similar substance)	LC50 (96h) 0.515 mg/L (Lepomis macrochirus) (similar substance) NOEC (28d) 0.0322 mg/L (Pimephales promelas) (similar substance)	No information available	EC50 (48h) 0.016 mg/L (Daphnia magna) (similar substance) NOEC (21d) 0.00415 mg/L (Daphnia magna) (similar substance)
Benzenemethanaminium, n,n-dimethyl-n-tetradecyl-, chloride	139-08-2	EC50 (72h) 0.049 mg/L (Pseudokirchnerella subcapitata)	LC50 (96h) 0.515 mg/L (Lepomis macrochirus) (similar substance) NOEC (28d) 0.0322 mg/L (Pimephales promelas)	No information available	EC50 (48h) 0.016 mg/L (Daphnia magna) (similar substance) NOEC (21d) 0.00415 mg/L (Daphnia magna) (similar substance)

12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Ethylene glycol	107-21-1	Readily biodegradable (100% @ 10d)
Ammonium, benzyldimethyldodecyl-, chloride	139-07-1	Readily biodegradable (83% @ 10d)
Benzenemethanaminium, N-hexadecyl-N,N-dimethyl-, chloride	122-18-9	Not readily biodegradable (30% @ 10d)
Benzenemethanaminium, n,n-dimethyl-n-tetradecyl-, chloride	139-08-2	Not readily biodegradable (30% @ 28d) (similar substances)

12.3. Bioaccumulative potential

Substances	CAS Number	Log Pow
Ethylene glycol	107-21-1	-1.36
Ammonium, benzyldimethyldodecyl-, chloride	139-07-1	BCF < 1.8 - 8.6 (similar substance)
Benzenemethanaminium, N-hexadecyl-N,N-dimethyl-, chloride	122-18-9	No information available
Benzenemethanaminium, n,n-dimethyl-n-tetradecyl-, chloride	139-08-2	No information available

12.4. Mobility in soil

Substances	CAS Number	Mobility
Ethylene glycol	107-21-1	No information available
Ammonium, benzyldimethyldodecyl-, chloride	139-07-1	No information available
Benzenemethanaminium, N-hexadecyl-N,N-dimethyl-, chloride	122-18-9	Spillage unlikely to penetrate soil KOC = >2,816.5 (similar substances)
Benzenemethanaminium, n,n-dimethyl-n-tetradecyl-, chloride	139-08-2	Spillage unlikely to penetrate soil KOC = >2,816.5 (similar substances)

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**US DOT**

UN Number UN3082
UN proper shipping name: Environmentally Hazardous Substance, Liquid, N.O.S. (Contains Quaternary Ammonium Compound)
Transport Hazard Class(es): 9
Packing Group: III
Environmental Hazards: Marine Pollutant
NAERG: NAERG 171
Not Restricted when shipped by land, rail or air in containers less than 119 gallons as authorized by 49 CFR 171.4(c).

Canadian TDG

UN Number UN3082
UN proper shipping name: Environmentally Hazardous Substance, Liquid, N.O.S. (Contains Quaternary Ammonium Compound)
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 Quaternary Ammonium Compound)
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 Quaternary Ammonium Compound)
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

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
Ethylene glycol	107-21-1	Not applicable
Ammonium, benzyldimethyldodecyl-, chloride	139-07-1	Not applicable
Benzenemethanaminium, N-hexadecyl-N,N-dimethyl-, chloride	122-18-9	Not applicable
Benzenemethanaminium, n,n-dimethyl-n-tetradecyl-, chloride	139-08-2	Not applicable

EPA SARA Title III Extremely Hazardous Substances

Substances	CAS Number	EPA SARA Title III Extremely Hazardous Substances
Ethylene glycol	107-21-1	Not applicable
Ammonium, benzyldimethyldodecyl-, chloride	139-07-1	Not applicable
Benzenemethanaminium, N-hexadecyl-N,N-dimethyl-, chloride	122-18-9	Not applicable
Benzenemethanaminium, n,n-dimethyl-n-tetradecyl-, chloride	139-08-2	Not applicable

EPA SARA (311,312) Hazard Class

Acute Health Hazard
 Chronic Health Hazard

EPA SARA (313) Chemicals

Substances	CAS Number	Toxic Release Inventory (TRI) - Group I	Toxic Release Inventory (TRI) - Group II
Ethylene glycol	107-21-1	1.0%	Not applicable
Ammonium, benzyldimethyldodecyl-, chloride	139-07-1	Not applicable	Not applicable
Benzenemethanaminium, N-hexadecyl-N,N-dimethyl-, chloride	122-18-9	Not applicable	Not applicable
Benzenemethanaminium, n,n-dimethyl-n-tetradecyl-, chloride	139-08-2	Not applicable	Not applicable

EPA CERCLA/Superfund Reportable Spill Quantity

Substances	CAS Number	CERCLA RQ
Ethylene glycol	107-21-1	5000 lb 2270 kg
Ammonium, benzyldimethyldodecyl-, chloride	139-07-1	Not applicable
Benzenemethanaminium, N-hexadecyl-N,N-dimethyl-, chloride	122-18-9	Not applicable

Benzenemethanaminium, n,n-dimethyl-n-tetradecyl-, chloride	139-08-2	Not applicable
--	----------	----------------

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

Substances	CAS Number	California Proposition 65
Ethylene glycol	107-21-1	developmental toxicity
Ammonium, benzyldimethyldodecyl-, chloride	139-07-1	Not applicable
Benzenemethanaminium, N-hexadecyl-N,N-dimethyl-, chloride	122-18-9	Not applicable
Benzenemethanaminium, n,n-dimethyl-n-tetradecyl-, chloride	139-08-2	Not applicable

U.S. State Right-to-Know Regulations

Substances	CAS Number	MA Right-to-Know Law	NJ Right-to-Know Law	PA Right-to-Know Law
Ethylene glycol	107-21-1	Present	0878	Environmental hazard
Ammonium, benzyldimethyldodecyl-, chloride	139-07-1	Not applicable	Not applicable	Not applicable
Benzenemethanaminium, N-hexadecyl-N,N-dimethyl-, chloride	122-18-9	Not applicable	Not applicable	Not applicable
Benzenemethanaminium, n,n-dimethyl-n-tetradecyl-, chloride	139-08-2	Not applicable	Not applicable	Not applicable

NFPA Ratings: Health 2, Flammability 1, Reactivity 0

HMIS Ratings: Health 2, Flammability 1, Reactivity 0

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: 05-Jun-2017

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

d - day

EC50 – Effective Concentration 50%

ErC50 – Effective Concentration growth rate 50%

h - hour

LC50 – Lethal Concentration 50%

LD50 – Lethal Dose 50%
LL50 – Lethal Loading 50%
mg/kg – milligram/kilogram
mg/L – milligram/liter
mg/m³ - milligram/cubic meter
mm - millimeter
mmHg - millimeter mercury
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
w/w - weight/weight

Key literature references and sources for data

www.ChemADVISOR.com/

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