

SAFETY DATA SHEET

SEM-8™ EMULSIFIER

Revision Date: 16-Dec-2015

Revision Number: 38

1. Product and Company Identification

Product Name

Product Trade Name: SEM-8™ EMULSIFIER

Other Names

Synonyms: None

Product Code: HM003938

Recommended Use

Recommended Use Emulsifier

Uses Advised Against No information available

Company Name, Address and Contact Details

Manufacturer/Supplier Halliburton New Zealand
1 Paraite Rd,
Bell Block, New Plymouth
New Zealand Registration No.: 824207

E-Mail address: fdunexchem@halliburton.com

Emergency Telephone Number +64 800 451719

New Zealand National Poisons Centre 0800 764 766 (24 hours)

2. Hazard(s) Identification

Statement of Hazardous Nature

Classified as hazardous according to criteria in the Hazardous Substances (Minimum Degrees of Hazard) Regulation 2001;
Classified as dangerous good according to NZS 5433:2012, UN, IMDG or IATA

Classification

3.1C Flammable Liquids - Medium hazard

6.3A Irritating to the skin

8.3A Corrosive to ocular tissue

Hazard and Precautionary Statements

Hazard Pictograms



Signal Word

Danger

Hazard Statements
 H318 - Causes serious eye damage
 H315 - Causes skin irritation
 H226 - Flammable liquid and vapor

Precautionary Statements

Prevention
 P101 - If medical advice is needed, have product container or label at hand
 P102 - Keep out of reach of children
 P103 - Read label before use
 P104 - Read Safety Data Sheet before use.
 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
 P264 - Wash face, hands and any exposed skin thoroughly after handling
 P280 - Wear protective gloves/eye protection/face protection

Response
 P370 + P378 - In case of fire: Use CO2, dry chemical, or foam
 P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
 P332 + P313 - If skin irritation occurs: Get medical advice/attention
 P362 - Take off contaminated clothing and wash before reuse
 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

Storage
 P403 + P235 - Store in a well-ventilated place. Keep cool

Disposal
 P501 - Dispose of contents/container to an approved incineration plant

Contains

Substances	CAS Number	Substance HSNO Classification
Polyethylene glycol (C6-C10) alkyl ether, sulfate ammonium salt	68037-05-8	3.1C 6.3A 8.3A
Isopropanol	67-63-0	3.1B 6.1E (oral) 6.3B 6.4A
Alcohols, C6-10, ethoxylated	70879-83-3	Not applicable

2.3. Other Hazards

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).
 This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

3. Composition and Information on Ingredients

Substances	CAS Number	PERCENT (w/w)
Polyethylene glycol (C6-C10) alkyl ether, sulfate ammonium salt	68037-05-8	60 - 100%
Isopropanol	67-63-0	10 - 30%
Alcohols, C6-10, ethoxylated	70879-83-3	1 - 5%

4. First-Aid Measures

Requirements for First Aid or Medical Care

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 with soap and water. Get medical attention if irritation persists. Remove contaminated clothing and launder before reuse.

Ingestion
 Do NOT induce vomiting. Give nothing by mouth. Obtain immediate medical attention.

Workplace Facilities Required

None

Relation to Health Effect**Most Important Symptoms/Effects**

Causes serious eye damage. Causes skin irritation. May be harmful if swallowed.

Medical Attention and Special Treatment**Notes to Physician**

Treat symptomatically

5. Fire-fighting measures

Type of Hazard**Flammability Hazard**

Flammable Liquid

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.

HAZCHEM Code

Hazchem Code: 3[Y]

Special Protective Equipment and Precautions for Fire Fighters**Special Protective Equipment for Fire-Fighters**

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

Special Exposure Hazards

Use water spray to cool fire exposed surfaces. Closed containers may explode in fire. Decomposition in fire may produce harmful gases. Vapors are heavier than air and may accumulate in low areas. Vapors may travel along the ground to be ignited at distant locations.

6. Spillage, Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures

Remove sources of ignition. Use appropriate protective equipment. Wear self-contained breathing apparatus in enclosed areas. 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. Remove ignition sources and work with non-sparking tools. Contain spill with sand or other inert materials. Scoop up and remove.

6.4. Reference to other sections

See Section 8 and 13 for additional information.

7. Handling and storage

7.1. Precautions for Safe Handling**Handling Precautions**

Remove sources of ignition. Avoid contact with eyes, skin, or clothing. Avoid breathing vapors. Ensure adequate ventilation. Wash hands after use. Launder contaminated clothing before reuse. Ground and bond containers when transferring from one container to another. Use appropriate protective equipment.

Handling Practices**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice.

Approved Handlers

This product does NOT require an approved handler.

7.2. Conditions for safe storage, including any incompatibilities

Store away from oxidizers. Keep from heat, sparks, and open flames. Keep container closed when not in use. Store in a dry

location. Store in a cool well ventilated area. Product has a shelf life of 36 months.

Product is incompatible with:

- Class 1 (explosives)
- Class 2 (flammable gases, aerosols)
- Class 3.2 (liquid desensitised explosives)
- Class 4 (readily combustible, self-reactive, solid desensitised explosives, spontaneously combustible, dangerous when wet)
- Class 5 (oxidisers, organic peroxides)

Store Site Requirements

No special controls required

Packaging

No special packaging required

8. Exposure Controls and Personal Protection

Workplace Exposure Standards

Exposure Limits

Substances	CAS Number	New Zealand WES	ACGIH TLV-TWA
Polyethylene glycol (C6-C10) alkyl ether, sulfate ammonium salt	68037-05-8	Not applicable	Not applicable
Isopropanol	67-63-0	STEL: 500 ppm mg/m ³ TWA: 400 ppm mg/m ³	TWA: 200 ppm STEL: 400 ppm
Alcohols, C6-10, ethoxylated	70879-83-3	Not applicable	Not applicable

Engineering Controls

Engineering Controls

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

Personal Protective Equipment (PPE)

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

In high concentrations, supplied air respirator or a self-contained breathing apparatus. 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): Nitrile gloves. (>= 0.35 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

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.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Physical State: Liquid

Color: Clear light yellow

Odor: Alcohol

Odor Threshold: No information available

Property

Values

Remarks/ - Method

pH:

7.0-8.5 @ 5%

Freezing Point/Range	-29 °C
Melting Point/Range	No data available
Boiling Point/Range	No data available
Flash Point	33.9 °C / 93 °F Seta closed cup
Evaporation rate	< 1 (BuAc = 1)
Vapor Pressure	15.7 mmHg @ 20C
Vapor Density	< 1 (Air=1)
Specific Gravity	1.054
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

10.2. Chemical Stability

Stable

10.4. Conditions to Avoid

Keep away from heat, sparks and flame.

10.5. Incompatible Materials

Strong oxidizers. Strong alkalis.

Product is incompatible with:

Class 1 (explosives)
 Class 2 (flammable gases, aerosols)
 Class 3.2 (liquid desensitised explosives)
 Class 4 (readily combustible, self-reactive, solid desensitised explosives, spontaneously combustible, dangerous when wet)
 Class 5 (oxidisers, organic peroxides)

10.6. Hazardous Decomposition Products

Oxides of nitrogen. Oxides of sulfur. Carbon monoxide and carbon dioxide.

Hazardous Reactions

Hazardous Polymerization: Will Not Occur

11. Toxicological Information

Health Effect from Likely Routes of Exposure**Acute Toxicity****Product Information**

Under certain conditions of use, some of the product ingredients may cause the following:

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 skin irritation. May cause skin defatting with prolonged exposure.

Ingestion

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

Chronic Effects/Carcinogenicity

No data available to indicate product or components present at greater than 0.1% are chronic health hazards.

Toxicity Data**Toxicology data for the components**

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Polyethylene glycol (C6-C10) alkyl ether, sulfate ammonium salt	68037-05-8	> 2,000 mg/kg (Rat) (similar substance)	> 2,000 mg/kg (Rat) (similar substance) 4000-12000 mg/kg (Rats) (similar substance)	No data available
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
Alcohols, C6-10, ethoxylated	70879-83-3	600 mg/kg (Rat) (similar substances) 1600 mg/kg (Rat) (similar substance) > 5000 mg/kg (Rat) (similar substance)	> 5200 mg/kg (rabbit) (similar substances) > 2000 mg/kg (rat) (similar substance) 2500 mg/kg (rabbit) (similar substance)	> saturated concentration (similar substance)

Substances	CAS Number	Skin corrosion/irritation
Polyethylene glycol (C6-C10) alkyl ether, sulfate ammonium salt	68037-05-8	Causes moderate skin irritation. (Rabbit) (similar substances)
Isopropanol	67-63-0	Non-irritating to the skin (Rabbit)
Alcohols, C6-10, ethoxylated	70879-83-3	May cause moderate skin irritation. (Rabbit) (similar substances)

Substances	CAS Number	Eye damage/irritation
Polyethylene glycol (C6-C10) alkyl ether, sulfate ammonium salt	68037-05-8	Causes severe eye irritation. (Rabbit) (similar substances)
Isopropanol	67-63-0	Causes moderate eye irritation. (Rabbit)
Alcohols, C6-10, ethoxylated	70879-83-3	Causes severe eye irritation. (Rabbit) (similar substances)

Substances	CAS Number	Skin Sensitization
Polyethylene glycol (C6-C10) alkyl ether, sulfate ammonium salt	68037-05-8	Did not cause sensitization on laboratory animals (guinea pig) (similar substances)
Isopropanol	67-63-0	Did not cause sensitization on laboratory animals (guinea pig)
Alcohols, C6-10, ethoxylated	70879-83-3	Did not cause sensitization on laboratory animals (similar substances)

Substances	CAS Number	Respiratory Sensitization
Polyethylene glycol (C6-C10) alkyl ether, sulfate ammonium salt	68037-05-8	No information available
Isopropanol	67-63-0	No information available
Alcohols, C6-10, ethoxylated	70879-83-3	No information available

Substances	CAS Number	Mutagenic Effects
Polyethylene glycol (C6-C10) alkyl ether, sulfate ammonium salt	68037-05-8	In vitro tests did not show mutagenic effects In vivo tests did not show mutagenic effects. (similar substances)
Isopropanol	67-63-0	In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects.
Alcohols, C6-10, ethoxylated	70879-83-3	In vitro tests did not show mutagenic effects In vivo tests did not show mutagenic effects. (similar substances)

Substances	CAS Number	Carcinogenic Effects
Polyethylene glycol (C6-C10) alkyl ether, sulfate ammonium salt	68037-05-8	Did not show carcinogenic effects in animal experiments (similar substances)
Isopropanol	67-63-0	Did not show carcinogenic effects in animal experiments
Alcohols, C6-10, ethoxylated	70879-83-3	Did not show carcinogenic effects in animal experiments (similar substances)

Substances	CAS Number	Reproductive toxicity
Polyethylene glycol (C6-C10) alkyl ether, sulfate ammonium salt	68037-05-8	Did not show teratogenic effects in animal experiments. (similar substances)
Isopropanol	67-63-0	No significant toxicity observed in animal studies at concentration requiring classification.
Alcohols, C6-10, ethoxylated	70879-83-3	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
Polyethylene glycol (C6-C10) alkyl ether, sulfate ammonium salt	68037-05-8	No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)
Isopropanol	67-63-0	May cause headache, dizziness, and other central nervous system effects.
Alcohols, C6-10, ethoxylated	70879-83-3	No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)

Substances	CAS Number	STOT - repeated exposure
Polyethylene glycol (C6-C10) alkyl ether, sulfate ammonium salt	68037-05-8	No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)
Isopropanol	67-63-0	No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)
Alcohols, C6-10, ethoxylated	70879-83-3	No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)

Substances	CAS Number	Aspiration hazard
Polyethylene glycol (C6-C10) alkyl ether, sulfate ammonium salt	68037-05-8	Not applicable
Isopropanol	67-63-0	Not applicable
Alcohols, C6-10, ethoxylated	70879-83-3	Not applicable

12. Ecological Information

12.1. Toxicity Ecotoxicity Effects

Product Ecotoxicity Data

No data available

Substance Ecotoxicity Data

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Polyethylene glycol (C6-C10) alkyl ether, sulfate ammonium salt	68037-05-8	EC50 (72h) 73.52 mg/L (Skeletonema costatum) ErC50 (72h) 32 mg/L (Selenstrum capricornutum) (similar substance) NOErC (72h) 9 mg/L (Selenastrum capricornutum) NOEC (72h) 32 mg/L (Skeletonema costatum)	LC50 (96h) 1 - 2.5 mg/L (Salmo trutta) (similar substance) LC50 (96h) 7.8 mg/L (Scophthalmus maximus) NOEC (30d) 0.88 mg/L (Pimephales promelas) (similar substance)	No information available	EC50 (48h) 1.17 mg/L (Daphnia magna) (similar substance) LC50 (96h) 232.5 mg/L (Acartia tonsa) NOEC (21d) 0.37 mg/L (Daphnia magna) (similar substance)
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)
Alcohols, C6-10, ethoxylated	70879-83-3	EC50 (72h) 0.7 mg/L (Selenestrum capricornutum) (similar substance)	EC50 (96h) 1.4 mg/L (Pimephales promelas) (similar substance) EC50 (96h) 3 mg/L	No information available	EC50 (48h) 0.2 mg/L (Daphnia magna) (similar substance) EC50 (48h) 0.39 mg/L

		EC50 (72h) 1.1 mg/L (Scenedesmus subspicatus) (similar substance)	(Brachydanio rerio) (similar substance) NOEC (30d) 0.28 mg/L (Pimephales promelas) (similar substance) NOEC (16d) 0.16 mg/L (Lepomis macrochirus) (similar substance)		(Ceriodaphnia dubia) (similar substance)
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12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Polyethylene glycol (C6-C10) alkyl ether, sulfate ammonium salt	68037-05-8	Readily biodegradable (87% @ 28d) (similar substances)
Isopropanol	67-63-0	Readily biodegradable (53% @ 5d)
Alcohols, C6-10, ethoxylated	70879-83-3	Readily biodegradable

12.3. Bioaccumulative potential

Substances	CAS Number	Log Pow
Polyethylene glycol (C6-C10) alkyl ether, sulfate ammonium salt	68037-05-8	No data available
Isopropanol	67-63-0	0.05
Alcohols, C6-10, ethoxylated	70879-83-3	12.7 - 237 L/kg (similar substance)

12.4. Mobility in soil

Substances	CAS Number	Mobility
Polyethylene glycol (C6-C10) alkyl ether, sulfate ammonium salt	68037-05-8	No information available
Isopropanol	67-63-0	KOC = 1.5
Alcohols, C6-10, ethoxylated	70879-83-3	No information available

Ecotoxicity Hazard Statements

None known

12.6. Other adverse effects**Endocrine Disruptor Information**

This product does not contain any known or suspected endocrine disruptors

13. Disposal Considerations**13.1. Waste treatment methods****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. Substance should NOT be deposited into a sewage facility.

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**IMDG/IMO**

UN Number: UN1993
 UN Proper Shipping Name: Flammable Liquid, N.O.S. (Contains Isopropanol)
 Transport Hazard Class(es): 3
 Packing Group: III
 Environmental Hazards: Not applicable
 EMS: EmS F-E, S-E

NZ 5433.1999

UN Number: UN1993
 UN Proper Shipping Name: Flammable Liquid, N.O.S. (Contains Isopropanol)
 Transport Hazard Class(es): 3
 Packing Group: III

IATA/ICAO

UN Number: UN1993
UN Proper Shipping Name: Flammable Liquid, N.O.S. (Contains Isopropanol)
Transport Hazard Class(es): 3
Packing Group: III

Special Precautions for User: None

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable

15. Regulatory Information

New Zealand Inventory of Chemicals All components are listed on the AICS or are subject to a relevant exemption, permit, or assessment certificate.

HSNO Approval Number HSR002495

Group Name Additives, Process Chemicals and Raw Materials (Flammable HSR002495)

HSNO Controls Refer to the NZ EPA website for more information: <http://www.epa.govt.nz>

Approved Handlers Not Applicable

Poisons Schedule: None Allocated

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 Stewardship at 1-580-251-4335.

Key or legend to abbreviations and acronyms

bw – body weight CAS – Chemical Abstracts Service EC50 – Effective Concentration 50% LC50 – Lethal Concentration 50% LD50 – Lethal Dose 50% LL50 – Lethal Loading 50% MARPOL – International Convention for the Prevention of Pollution from Ships mg/kg – milligram/kilogram mg/L – milligram/liter NOEC – No Observed Effect Concentration OEL – Occupational Exposure Limit ppm – parts per million TWA – Time-Weighted Average VOC – Volatile Organic Carbon C – Celsius IATA/ICAO – International Air Transport Association / International Civil Aviation Organization IMDG/IMO – International Maritime Dangerous Goods / International Maritime Organization 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
 HERA
 OSHA

Revision Date: 16-Dec-2015

Revision Note

SDS sections updated:

1

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