multi-chem®
A HALLIBURTON SERVICE

SAFETY DATA SHEET

Product Trade Name: **MC B-8810A**

Revision Date: 11-Mar-2022 **Revision Number:** 2

1. Identification

1.1. Product Identifier

Product Trade Name: MC B-8810A
Synonyms None
Chemical Family: Blend
Internal ID Code MB000674

1.2 Recommended use and restrictions on use

Application: Biocide
Uses advised against Consumer use

1.3 Manufacturer's Name and Contact Details

Manufacturer/Supplier
Multi-Chem Group LLC
A Halliburton Energy Services, Inc. Company
3000 N. Sam Houston Pkwy E., Houston, TX 77032
Phone: 1-281-871-4000

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

Prepared By Chemical Stewardship
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. Hazards Identification

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

Skin Corrosion / Irritation	Category 2 - H315
Serious Eye Damage/Irritation	Category 1 - H318
Acute Aquatic Toxicity	Category 2 - H401
Chronic Aquatic Toxicity	Category 3 - H412

2.2. Label Elements

Hazard Pictograms

Signal Word: Danger

Hazard Statements
H315 - Causes skin irritation
H318 - Causes serious eye damage
H401 - Toxic to aquatic life
H412 - Harmful to aquatic life with long lasting effects

Precautionary Statements

Prevention
P264 - Wash face, hands and any exposed skin thoroughly after handling
P273 - Avoid release to the environment
P280 - Wear protective gloves/protective clothing/eye protection/face protection

Response
P302 + P352 - IF ON SKIN: Wash with plenty of water.
P362 + P364 - 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
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
Didecyldimethylammonium chloride	7173-51-5	5 - 10%	Acute Tox. 4 (H302) Skin Corr. 1B (H314) Eye Corr. 1 (H318) STOT SE 3 (H335) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)
Ethanol	64-17-5	1 - 5%	Eye Irrit. 2A (H319) Flam. Liq. 2 (H225)

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, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.

Eyes In case of contact, immediately flush eyes with plenty of water for at least 30 minutes. Remove contact lenses after the first 5 minutes and continue washing. Seek immediate medical attention/advice. Suitable emergency eye wash facility

	should be immediately available
Skin	In case of contact, immediately flush skin with plenty of soap and water for at least 15 minutes. Get medical attention.
Ingestion	Rinse mouth with water many times. Get medical attention, if symptoms occur

4.2 Most important symptoms/effects, acute and delayed

Causes skin irritation. Causes severe eye irritation which may damage tissue.

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

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. 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.

7. Handling and storage

7.1. Precautions for safe handling

Handling Precautions

Ensure adequate ventilation. Use appropriate protective equipment. 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 well ventilated area.

8. Exposure Controls/Personal Protection

8.1 Occupational Exposure Limits

Substances	CAS Number	OSHA PEL-TWA	ACGIH TLV-TWA
Didecyldimethylammonium chloride	7173-51-5	Not applicable	Not applicable
Ethanol	64-17-5	TWA: 1000 ppm TWA: 1900 mg/m³	STEL: 1000 ppm

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 None known.

9. Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Physical State: Liquid
Odor: Mild

Color Clear Light Amber to Dark Amber
Odor Threshold: No information available

Property Remarks/ - Method	Values
pH:	5.5 - 7.5 (10% in 1:1 IPA:H2O)
Freezing Point / Range	No data available
Melting Point / Range	No data available
Pour Point / Range	No data available
Boiling Point / Range	No data available
Flash Point	94 °C / 201.8 °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	0.9645 - 0.9895 (20 °C/68 °F)
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
Liquid Density	8.04 - 8.25 lbs/gal
Bulk Density	964 - 990 kg/m^3

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. Strong acids. Strong alkalis.

10.6. Hazardous decomposition products
Oxides of carbon and nitrogen, AVOID extreme heat.

11. Toxicological Information

11.1 Information on likely routes of exposure

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

11.2 Symptoms related to the physical, chemical and toxicological characteristics

Acute Toxicity

Inhalation	May cause mild respiratory irritation.
Eye Contact	Causes serious eye damage.
Skin Contact	Causes skin irritation.
Ingestion	May cause abdominal pain, vomiting, nausea, and diarrhea.

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

11.3 Toxicity data

Toxicology data for the components

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Didecyldimethylammonium chloride	7173-51-5	329 mg/kg-bw (rat)	2930 mg/kg-bw (rabbit)	No data available
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

Substances	CAS Number	Skin corrosion/irritation
Didecyldimethylammonium	7173-51-5	Skin, rabbit: Causes severe skin irritation with tissue destruction. Causes burns

chloride		
Ethanol	64-17-5	Not irritating to skin in rabbits.

Substances	CAS Number	Serious eye damage/irritation
Didecyldimethylammonium chloride	7173-51-5	Corrosive to eyes Causes severe irritation and or burns Eye, rabbit:
Ethanol	64-17-5	Causes moderate eye irritation (Rabbit)

Substances	CAS Number	Skin Sensitization
Didecyldimethylammonium chloride	7173-51-5	Did not cause sensitization on laboratory animals (guinea pig)
Ethanol	64-17-5	Did not cause sensitization on laboratory animals

Substances	CAS Number	Respiratory Sensitization
Didecyldimethylammonium chloride	7173-51-5	No information available
Ethanol	64-17-5	Did not cause sensitization on laboratory animals

Substances	CAS Number	Mutagenic Effects
Didecyldimethylammonium chloride	7173-51-5	In vivo tests did not show mutagenic effects. In vitro tests did not show mutagenic effects.
Ethanol	64-17-5	Not regarded as mutagenic.

Substances	CAS Number	Carcinogenic Effects
Didecyldimethylammonium chloride	7173-51-5	Did not show carcinogenic effects in animal experiments
Ethanol	64-17-5	Did not show carcinogenic effects in animal experiments

Substances	CAS Number	Reproductive toxicity
Didecyldimethylammonium chloride	7173-51-5	Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments.
Ethanol	64-17-5	Animal testing did not show any effects on fertility.

Substances	CAS Number	STOT - single exposure
Didecyldimethylammonium chloride	7173-51-5	May cause respiratory irritation.
Ethanol	64-17-5	No significant toxicity observed in animal studies at concentration requiring classification.

Substances	CAS Number	STOT - repeated exposure
Didecyldimethylammonium chloride	7173-51-5	No data of sufficient quality are available. Not applicable due to corrosivity of the substance.
Ethanol	64-17-5	No significant toxicity observed in animal studies at concentration requiring classification.

Substances	CAS Number	Aspiration hazard
Didecyldimethylammonium chloride	7173-51-5	Not applicable
Ethanol	64-17-5	Not applicable

12. Ecological Information

12.1. Toxicity

Ecotoxicity effects

Toxic to aquatic life. Harmful 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
Didecyldimethylammonium chloride	7173-51-5	ErC50 (96 h) =0.053 mg/L (Pseudokirchnerella subcapitata)	LC50 (96 h) =0.97 mg/L (Danio rerio)	EC50 (3h) 17.95 mg/L (Activated sludge)	EC50 (48 h) =0.057 mg/L (Daphnia magna) NOEC (21 d) =0.021 mg/L (Daphnia magna)
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 (Ceridaphnia dubia) NOEC 9.6 mg/L (Daphnia magna)

12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Didecyldimethylammonium chloride	7173-51-5	Readily biodegradable (69% @ 28d)
Ethanol	64-17-5	No information available

12.3. Bioaccumulative potential

Substances	CAS Number	Bioaccumulation
Didecyldimethylammonium chloride	7173-51-5	-0.41 BCF = 2.1
Ethanol	64-17-5	-0.32

12.4. Mobility in soil

Substances	CAS Number	Mobility
Didecyldimethylammonium chloride	7173-51-5	KOC = >667
Ethanol	64-17-5	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

US DOT

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

US DOT Bulk

UN3082, Environmentally Hazardous Substance, Liquid, N.O.S. (Contains Quaternary Ammonium Chloride), 9, PG III, Marine Pollutant

Canadian TDG

UN Number UN3082
UN proper shipping name: Environmentally Hazardous Substance, Liquid, N.O.S. (Contains Quaternary Ammonium Chloride)
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 Chloride)
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 Chloride)
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	TSCA Section 5(E) Consent Orders
Didecyldimethylammonium chloride	7173-51-5	Not applicable	Not applicable
Ethanol	64-17-5	Not applicable	Not applicable

EPA SARA Title III Extremely Hazardous Substances

Substances	CAS Number	EPA SARA Title III Extremely Hazardous Substances
Didecyldimethylammonium chloride	7173-51-5	Not applicable
Ethanol	64-17-5	Not applicable

EPA SARA (311,312) Hazard Class
Skin Corrosion or Irritation
Serious eye damage or eye irritation

EPA SARA (313) Chemicals:

Substances	CAS Number	Toxic Release Inventory (TRI) - Group I	Toxic Release Inventory (TRI) - Group II
Didecyldimethylammonium chloride	7173-51-5	Not applicable	Not applicable
Ethanol	64-17-5	Not applicable	Not applicable

EPA CERCLA/Superfund Reportable Spill Quantity

Substances	CAS Number	CERCLA RQ
Didecyldimethylammonium chloride	7173-51-5	Not applicable
Ethanol	64-17-5	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.

FIFRA Information
This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard

information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

Signal Word: DANGER

Hazard Statements Causes irreversible eye damage and skin burns.
Harmful if swallowed or absorbed through skin.
May be irritating to nose and throat.
This pesticide is toxic to fish and aquatic organisms.

California Proposition 65

Substances	CAS Number	California Proposition 65
Didecyldimethylammonium chloride	7173-51-5	Not applicable
Ethanol	64-17-5	developmental toxicity carcinogen carcinogen

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
Didecyldimethylammonium chloride	7173-51-5	Not applicable	Not applicable	Not applicable
Ethanol	64-17-5	Teratogen	Present	Present

Canadian Regulations

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

16. Other information

Preparation Information

Prepared By Chemical Stewardship
e-mail: fdunexchem@halliburton.com

Revision Date: 11-Mar-2022

Reason for Revision SDS sections updated:
14

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.

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

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/m^3 - 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