

SAFETY DATA SHEET

Product Trade Name: MC MX 319-6

Revision Date: 26-Apr-2016

Revision Number: 2

1. Identification

1.1. Product Identifier

Product Trade Name: MC MX 319-6
Synonyms: None
Chemical Family: Blend
Internal ID Code: MC001424

1.2 Recommended use and restrictions on use

Application: Corrosion Inhibitor
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 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

2. Hazard(s) Identification

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

Acute Oral Toxicity	Category 4 - H302
Skin Corrosion / Irritation	Category 1 - H314
Serious Eye Damage/Irritation	Category 1 - H318
Reproductive Toxicity	Category 1B - H360
Specific Target Organ Toxicity - (Single Exposure)	Category 1 - H370; Category 3 - H335
Acute Aquatic Toxicity	Category 1 - H400
Chronic Aquatic Toxicity	Category 2 - H411
Flammable liquids.	Category 3 - H226

2.2. Label Elements

Hazard pictograms



Signal Word:

Danger

Hazard Statements

H226 - Flammable liquid and vapor
 H302 - Harmful if swallowed
 H314 - Causes severe skin burns and eye damage
 H318 - Causes serious eye damage
 H335 - May cause respiratory irritation
 H360 - May damage fertility or the unborn child
 H370 - Causes damage to organs
 H400 - Very toxic to aquatic life
 H411 - Toxic to aquatic life with long lasting effects

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
 P270 - Do not eat, drink or smoke when using this product
 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+ P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
 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
 P363 - Wash contaminated clothing 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
 P310 - Immediately call a POISON CENTER or doctor/physician
 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
Disposal	P405 - Store locked up 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
n-Benzyl dimethyl cocoamine, C12-C18 quaternary salt	61789-71-7	10 - 30%	Acute Tox. 4 (H302) Acute Tox. 3 (H311) Skin Corr. 1B (H314) Eye Corr. 1 (H318) STOT SE 3 (H335) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)
Methanol	67-56-1	10 - 30%	Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 3 (H331) Repr. 1B (H360) STOT SE 1 (H370) Flam. Liq. 2 (H225)
Isopropanol	67-63-0	5 - 10%	Eye Irrit. 2 (H319) STOT SE 3 (H336) 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	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Seek immediate medical attention/advice.
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 30 minutes and remove contaminated clothing, shoes and leather goods immediately. Get medical attention immediately.
Ingestion	Following ingestion, onset of symptoms may be delayed by 12 to 24 hours. Admission to hospital should be the first priority even if symptoms are absent. 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

Harmful if swallowed. Causes severe skin irritation with tissue destruction. Causes severe eye irritation which may damage tissue. Potential reproductive hazard. May cause birth defects. May cause damage to internal organs. May cause respiratory irritation.

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

Notes to Physician	Gastric lavage or emesis should be performed as soon as possible to minimize absorption, and is recommended within 4 hours of ingestion. Ethanol may be given intravenously to
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prevent build-up of toxic effects of methanol metabolites. Visual disturbances and metabolic acidosis may occur and dialysis, preferably hemodialysis may be employed to treat these complications.

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
n-Benzyl dimethyl cocoamine,	61789-71-7	Not applicable	Not applicable

C12-C18 quaternary salt			
Methanol	67-56-1	TWA: 200 ppm	TWA: 200 ppm STEL: 250 ppm
Isopropanol	67-63-0	TWA: 400 ppm	TWA: 200 ppm STEL: 400 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 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 Colorless to Light Amber

Odor: Mild **Odor Threshold:** No information available

<u>Property</u>	<u>Values</u>
<u>Remarks/ - Method</u>	
pH:	7 - 9 (10% in 1:1 IPA:H2O)
Freezing Point / Range	-17.8 °C / 0 °F
Melting Point / Range	No data available
Boiling Point / Range	No data available
Flash Point	36.7 °C / 98.1 °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	0.9438 - 0.9688
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

7.87-8.08 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. Oxides of nitrogen.

11. Toxicological Information**11.1 Information on likely routes of exposure****Principle Route of Exposure** Inhalation. Skin contact. Ingestion. Eye contact.**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. May cause respiratory irritation.

Eye Contact

Causes serious eye damage.

Skin Contact

Causes severe burns.

Ingestion

Ingestion of this product may cause blindness due to the presence of methanol. Harmful if swallowed. Causes burns of the mouth, throat and stomach.

Chronic Effects/Carcinogenicity May cause birth defects. Contains known or suspected reproductive toxins.**11.3 Toxicity data****Toxicology data for the components**

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
n-Benzyl dimethyl cocoamine, C12-C18 quaternary salt	61789-71-7	304.5 mg/kg (Rat)	930 mg/kg (rat)	No data available
Methanol	67-56-1	300 mg/kg-bw (human) < 790 to 13,000 mg/kg (rat)	1000 mg/kg-bw (human) 17,100 mg/kg (rabbit)	10 mg/L (human, vapor, 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

Substances	CAS Number	Skin corrosion/irritation
n-Benzyl dimethyl	61789-71-7	Causes burns (Rabbit)

cocoamine, C12-C18 quaternary salt		
Methanol	67-56-1	Non-irritating to the skin (Rabbit)
Isopropanol	67-63-0	Non-irritating to the skin (Rabbit)

Substances	CAS Number	Serious eye damage/irritation
n-Benzyl dimethyl cocoamine, C12-C18 quaternary salt	61789-71-7	Causes eye burns (Rabbit)
Methanol	67-56-1	Non-irritating to the eye (Rabbit)
Isopropanol	67-63-0	Causes moderate eye irritation (Rabbit)

Substances	CAS Number	Skin Sensitization
n-Benzyl dimethyl cocoamine, C12-C18 quaternary salt	61789-71-7	Did not cause sensitization on laboratory animals (guinea pig)
Methanol	67-56-1	Did not cause sensitization on laboratory animals (guinea pig)
Isopropanol	67-63-0	Did not cause sensitization on laboratory animals (guinea pig)

Substances	CAS Number	Respiratory Sensitization
n-Benzyl dimethyl cocoamine, C12-C18 quaternary salt	61789-71-7	No information available
Methanol	67-56-1	No information available
Isopropanol	67-63-0	No information available

Substances	CAS Number	Mutagenic Effects
n-Benzyl dimethyl cocoamine, C12-C18 quaternary salt	61789-71-7	Did not show mutagenic effects in animal experiments
Methanol	67-56-1	The weight of evidence from available in vitro and in vivo studies indicates that this substance is not expected to be mutagenic.
Isopropanol	67-63-0	In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects.

Substances	CAS Number	Carcinogenic Effects
n-Benzyl dimethyl cocoamine, C12-C18 quaternary salt	61789-71-7	Did not show carcinogenic effects in animal experiments
Methanol	67-56-1	No data of sufficient quality are available.
Isopropanol	67-63-0	Did not show carcinogenic effects in animal experiments

Substances	CAS Number	Reproductive toxicity
n-Benzyl dimethyl cocoamine, C12-C18 quaternary salt	61789-71-7	Not a confirmed teratogen or embryotoxin.
Methanol	67-56-1	Experiments have shown reproductive toxicity effects on laboratory animals
Isopropanol	67-63-0	No significant toxicity observed in animal studies at concentration requiring classification.

Substances	CAS Number	STOT - single exposure
n-Benzyl dimethyl cocoamine, C12-C18 quaternary salt	61789-71-7	Causes moderate respiratory irritation.
Methanol	67-56-1	May cause disorder and damage to the Central Nervous System (CNS)
Isopropanol	67-63-0	May cause headache, dizziness, and other central nervous system effects.

Substances	CAS Number	STOT - repeated exposure
n-Benzyl dimethyl cocoamine, C12-C18 quaternary salt	61789-71-7	None under normal use conditions
Methanol	67-56-1	No data of sufficient quality are available.
Isopropanol	67-63-0	No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)

Substances	CAS Number	Aspiration hazard
n-Benzyl dimethyl cocoamine, C12-C18	61789-71-7	No information available

quaternary salt		
Methanol	67-56-1	Not applicable
Isopropanol	67-63-0	Not applicable

12. Ecological Information

12.1. Toxicity

Ecotoxicity effects

Very toxic to aquatic life. Toxic to aquatic life with long lasting 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
n-Benzyl dimethyl cocoamine, C12-C18 quaternary salt	61789-71-7	EC50 (72h) < 0.1 mg/L (Skeletonema costatum)	LC50 (96h) 0.44 mg/L (Scophthalmus maximus)	No information available	LC50 (48h) 0.72 mg/L (Acartia tonsa)
Methanol	67-56-1	EC50 (96 h) =22000 mg/L (Pseudokirchnerella subcapitata) NOEC (8 d) =8000 mg/L (Scenedesmus quadricauda)	LC50 (96 h) =15400 mg/L (Lepomis macrochirus) EC50 (200 h) =14536 mg/L (Oryzias latipes)	IC50 (3h) > 1000 mg/L (activated sludge)	EC50 (96 h) =18260 mg/L (Daphnia magna) NOEC (21 d) =208 mg/L (Daphnia magna)
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)

12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
n-Benzyl dimethyl cocoamine, C12-C18 quaternary salt	61789-71-7	Biodegradable.
Methanol	67-56-1	(95-97% @ 20d)
Isopropanol	67-63-0	Readily biodegradable (53% @ 5d)

12.3. Bioaccumulative potential

Substances	CAS Number	Log Pow
n-Benzyl dimethyl cocoamine, C12-C18 quaternary salt	61789-71-7	No information available
Methanol	67-56-1	-0.77 BCF = 1.0 – 4.5 (Cyprinus carpio) BCF < 10 (Leuciscus idus melanotus)
Isopropanol	67-63-0	0.05

12.4. Mobility in soil

Substances	CAS Number	Mobility
n-Benzyl dimethyl cocoamine, C12-C18 quaternary salt	61789-71-7	No information available
Methanol	67-56-1	No information available
Isopropanol	67-63-0	KOC = 1.5

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 Dispose of container according to national or local regulations.

14. Transport Information**US DOT**

UN Number UN2924
UN proper shipping name: Flammable Liquid, Corrosive, N.O.S. (Contains Methanol, Quaternary Ammonium Chloride)
Transport Hazard Class(es): 3 (8)
Packing Group: III
Environmental Hazards Marine Pollutant
NAERG: NAERG 132

Canadian TDG

UN Number UN2924
UN proper shipping name: Flammable Liquid, Corrosive, N.O.S. (Contains Methanol, Quaternary Ammonium Chloride)
Transport Hazard Class(es): 3 (8)
Packing Group: III
Environmental Hazards Marine Pollutant

IMDG/IMO

UN Number UN2924
UN proper shipping name: Flammable Liquid, Corrosive, N.O.S. (Contains Methanol, Quaternary Ammonium Chloride)
Transport Hazard Class(es): 3 (8)
Packing Group: III
Environmental Hazards Marine Pollutant
EMS: EmS F-E, S-C

IATA/ICAO

UN Number UN2924
UN proper shipping name: Flammable Liquid, Corrosive, N.O.S. (Contains Methanol, Quaternary Ammonium Chloride)
Transport Hazard Class(es): 3 (8)
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
n-Benzyl dimethyl cocoamine, C12-C18 quaternary salt	61789-71-7	Not applicable
Methanol	67-56-1	Not applicable
Isopropanol	67-63-0	Not applicable

EPA SARA Title III Extremely Hazardous Substances

Substances	CAS Number	EPA SARA Title III Extremely Hazardous Substances
n-Benzyl dimethyl cocoamine, C12-C18 quaternary salt	61789-71-7	Not applicable
Methanol	67-56-1	Not applicable
Isopropanol	67-63-0	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
n-Benzyl dimethyl cocoamine, C12-C18 quaternary salt	61789-71-7	Not applicable	Not applicable
Methanol	67-56-1	1.0%	Not applicable
Isopropanol	67-63-0	1.0%	Not applicable

EPA CERCLA/Superfund Reportable Spill Quantity

Substances	CAS Number	CERCLA RQ
n-Benzyl dimethyl cocoamine, C12-C18 quaternary salt	61789-71-7	Not applicable
Methanol	67-56-1	5000 lb 2270 kg
Isopropanol	67-63-0	Not applicable

EPA RCRA Hazardous Waste Classification

Ignitability D001
 Corrosivity D002

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 3, Flammability 3, Reactivity 0
HMIS Ratings: Health 3*, 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: 26-Apr-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

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