multi-chem®
A HALLIBURTON SERVICE

SAFETY DATA SHEET

Product Trade Name: **MC MX 6-3558**

Revision Date: 29-Sep-2021 **Revision Number:** 3

1. Identification

1.1. Product Identifier

Product Trade Name: MC MX 6-3558
Synonyms None
Chemical Family: Blend
Internal ID Code MC004767

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
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

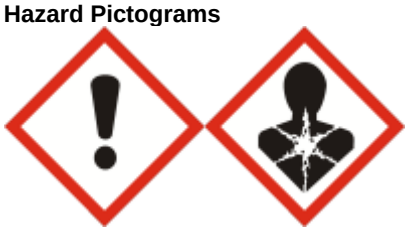
2.1 Classification in accordance with paragraph (d) of §1910.1200

Acute inhalation toxicity - vapor	Category 4 - H332
Skin Corrosion / Irritation	Category 2 - H315
Serious Eye Damage/Irritation	Category 2 - H319
Skin Sensitization	Category 1 - H317
Specific Target Organ Toxicity - (Single Exposure)	Category 1 - H370
Specific Target Organ Toxicity - (Repeated Exposure)	Category 1 - H372
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
H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation
H332 - Harmful if inhaled
H370 - Causes damage to organs
H401 - Toxic to aquatic life
H412 - Harmful 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
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
P270 - Do not eat, drink or smoke when using this product
P272 - Contaminated work clothing should not be allowed out of the workplace
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.
P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention
P362 + P364 - Take off contaminated clothing and wash before reuse
P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312 - Call a POISON CENTER and 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
P337 + P313 - If eye irritation persists: Get medical advice/attention

Storage

P405 - Store locked up

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
Methanol	67-56-1	1 - 5%	Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 3 (H331) STOT SE 1 (H370)

			Flam. Liq. 2 (H225)
Modified Tall Oil	Proprietary	1 - 5%	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) STOT SE 3 (H335) Aquatic Acute 1 (H400)
Ethylene glycol	107-21-1	1 - 5%	Acute Tox. 4 (H302) STOT SE 1 (H370)
Phosphonic Acid Salt	Proprietary	1 - 5%	Skin Irrit. 2 (H315) Eye Irrit. 2A (H319)
Morpholine process residues	Proprietary	1 - 5%	Skin Irrit. 2 (H315) Eye Corr. 1 (H318) Skin Sens. 1 (H317)
Quaternary ammonium compound	Proprietary	1 - 5%	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)
Organic Alcohol	Proprietary	0.1 - 1%	Acute Tox. 3 (H301) Acute Tox. 2 (H310) Acute Tox. 2 (H330) Skin Irrit. 2 (H315) Eye Corr. 1 (H318) Skin Sens. 1 (H317) STOT SE 3 (H335) STOT RE 2 (H373) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) Flam. Liq. 4 (H227)

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

4. First Aid Measures

4.1. Description of first aid measures

Inhalation Remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, get immediate medical attention.

Eyes Immediately flush eyes with large amounts of water for at least 15 minutes. Get immediate 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 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.

4.2 Most important symptoms/effects, acute and delayed

Causes eye irritation. Causes skin irritation. May cause allergic skin reaction. Harmful if inhaled. May cause damage to internal organs.

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 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. 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

Do not breathe dust/fume/gas/mist/vapors/spray. 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. Store away from oxidizers. Keep container closed when not in use.

8. Exposure Controls/Personal Protection

8.1 Occupational Exposure Limits

Substances	CAS Number	OSHA PEL-TWA	ACGIH TLV-TWA
Methanol	67-56-1	TWA: 200 ppm TWA: 260 mg/m^3	TWA: 200 ppm STEL: 250 ppm
Modified Tall Oil	Proprietary	Not applicable	Not applicable
Ethylene glycol	107-21-1	Not applicable	TWA: 25 ppm STEL: 50 ppm STEL: 10 mg/m^3

Phosphonic Acid Salt	Proprietary	Not applicable	Not applicable
Morpholine process residues	Proprietary	Not applicable	Not applicable
Quaternary ammonium compound	Proprietary	Not applicable	Not applicable
Organic Alcohol	Proprietary	Not applicable	Not applicable

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. Positive pressure self-contained breathing apparatus if methanol is released.

Hand Protection Impervious gloves Manufacturer's directions for use should be observed because of great diversity of types.

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 Chemical goggles; also wear a face shield if splashing hazard exists.

Other Precautions None known.

9. Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Physical State: Liquid

Color Light Amber to Dark Amber , Clear to Slightly Hazy

Odor: Mild

Odor Threshold: No information available

Property Remarks/ - Method	Values
pH:	6.07 - 7.07 (10% in 1:1 IPA:H2O)
Freezing Point / Range	-9.4 °C / 15 °F
Melting Point / Range	No data available
Pour Point / Range	No data available
Boiling Point / Range	No data available
Flash Point	> 93.3 °C / > 200 °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	0.9982 - 1.0232 (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	8.32 - 8.52 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
None anticipated

10.5. Incompatible materials
Strong oxidizers.

10.6. Hazardous decomposition products
Carbon oxides. Oxides of sulfur. Oxides of phosphorus. Oxides of nitrogen. Ammonia. Hydrogen chloride.

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	Harmful if inhaled. May cause central nervous system depression including headache, dizziness, drowsiness, incoordination, slowed reaction time, slurred speech, giddiness and unconsciousness.
Eye Contact	Causes serious eye irritation.
Skin Contact	Causes skin irritation. May cause an allergic skin reaction.
Ingestion	May cause abdominal pain, vomiting, nausea, and diarrhea. May cause headache, dizziness, nausea, vomiting, gastrointestinal irritation and central nervous system depression. Ingestion of this product may cause blindness due to the presence of methanol. May cause kidney damage.

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
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)
Modified Tall Oil	Proprietary	No data available	No data available	No data available
Ethylene glycol	107-21-1	1400 mg/kg bw (Human)	9530 mg/kg (Rabbit)	> 2.5 mg/L (Rat, mist, 6h) (saturated concentration)

Phosphonic Acid Salt	Proprietary	No data available	No data available	No data available
Morpholine process residues	Proprietary	3816 mg/kg-bw (rat)	> 2000 mg/kg (Rat)	No toxicity at saturation (rat, 8 h, vapour)
Quaternary ammonium compound	Proprietary	304.5 mg/kg (rat) 426 mg/kg (rat)	930 mg/kg (rat) 919 mg/kg (mouse)	No data available
Organic Alcohol	Proprietary	98 - 336 mg/kg (Rat)	112-251 mg/kg (Rabbit)	2 mg/L (Rat) 4h

Substances	**CAS Number**	**Skin corrosion/irritation**
Methanol	67-56-1	Non-irritating to the skin (Rabbit)
Modified Tall Oil		May cause moderate skin irritation.
Ethylene glycol	107-21-1	Non-irritating to the skin (Rabbit)
Phosphonic Acid Salt		May cause moderate skin irritation.
Morpholine process residues		Causes moderate skin irritation. (Rabbit) Skin, rabbit:
Quaternary ammonium compound		Causes severe irritation and or burns
Organic Alcohol		Skin, rabbit: Causes moderate skin irritation.

Substances	**CAS Number**	**Serious eye damage/irritation**
Methanol	67-56-1	Non-irritating to the eye (Rabbit)
Modified Tall Oil		May cause moderate eye irritation.
Ethylene glycol	107-21-1	Non-irritating to the eye (Rabbit)
Phosphonic Acid Salt		May cause moderate eye irritation.
Morpholine process residues		Causes eye burns Causes severe eye irritation. Will damage tissue.
Quaternary ammonium compound		Causes severe eye irritation which may damage tissue.
Organic Alcohol		Eye, rabbit: Causes severe eye irritation. Will damage tissue.

Substances	**CAS Number**	**Skin Sensitization**
Methanol	67-56-1	Did not cause sensitization on laboratory animals (guinea pig)
Modified Tall Oil		No information available
Ethylene glycol	107-21-1	Did not cause sensitization on laboratory animals (guinea pig) Patch test on human volunteers did not demonstrate sensitization properties
Phosphonic Acid Salt		No information available
Morpholine process residues		May cause sensitization by skin contact (mouse)
Quaternary ammonium compound		Did not cause sensitization on laboratory animals (guinea pig)
Organic Alcohol		Skin sensitizer in guinea pig.

Substances	**CAS Number**	**Respiratory Sensitization**
Methanol	67-56-1	No information available
Modified Tall Oil		No information available
Ethylene glycol	107-21-1	No information available
Phosphonic Acid Salt		No information available
Morpholine process residues		No information available
Quaternary ammonium compound		No information available
Organic Alcohol		No information available

Substances	**CAS Number**	**Mutagenic Effects**
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.
Modified Tall Oil		No information available
Ethylene glycol	107-21-1	In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects.
Phosphonic Acid Salt		No information available
Morpholine process residues		In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects.
Quaternary ammonium compound		In vitro tests did not show mutagenic effects In vivo tests did not show mutagenic effects.
Organic Alcohol		The weight of evidence from available in vitro and in vivo studies indicates that this substance is not expected to be mutagenic.

Substances	**CAS Number**	**Carcinogenic Effects**
Methanol	67-56-1	No data of sufficient quality are available.
Modified Tall Oil		No information available

Ethylene glycol	107-21-1	Did not show carcinogenic effects in animal experiments
Phosphonic Acid Salt		No information available
Morpholine process residues		No information available
Quaternary ammonium compound		Did not show carcinogenic effects in animal experiments
Organic Alcohol		No information available

Substances	CAS Number	Reproductive toxicity
Methanol	67-56-1	Based on available data, the classification criteria are not met. Experiments have shown reproductive toxicity effects on laboratory animals
Modified Tall Oil		No information available
Ethylene glycol	107-21-1	Data are inconclusive or insufficient for classification. Fetotoxic and teratogenic effects observed in experimental animals at concentrations that did not produce maternal toxicity.
Phosphonic Acid Salt		No information available
Morpholine process residues		Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments.
Quaternary ammonium compound		Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments.
Organic Alcohol		Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments.

Substances	CAS Number	STOT - single exposure
Methanol	67-56-1	May cause disorder and damage to the Central Nervous System (CNS)
Modified Tall Oil		May cause respiratory irritation.
Ethylene glycol	107-21-1	May cause disorder and damage to the Kidney; Central Nervous System (CNS)
Phosphonic Acid Salt		No information available
Morpholine process residues		No significant toxicity observed in animal studies at concentration requiring classification.
Quaternary ammonium compound		No information available May cause respiratory irritation.
Organic Alcohol		May cause respiratory irritation.

Substances	CAS Number	STOT - repeated exposure
Methanol	67-56-1	Causes damage to organs through prolonged or repeated exposure: Central Nervous System (CNS)
Modified Tall Oil		No information available
Ethylene glycol	107-21-1	Causes damage to organs through prolonged or repeated exposure: Kidney
Phosphonic Acid Salt		No information available
Morpholine process residues		No significant toxicity observed in animal studies at concentration requiring classification.
Quaternary ammonium compound		No significant toxicity observed in animal studies at concentration requiring classification.
Organic Alcohol		Causes damage to organs through prolonged or repeated exposure: (Liver) Heart

Substances	CAS Number	Aspiration hazard
Methanol	67-56-1	Not applicable
Modified Tall Oil		Not applicable
Ethylene glycol	107-21-1	No information available
Phosphonic Acid Salt		No information available
Morpholine process residues		Not applicable
Quaternary ammonium compound		Not applicable
Organic Alcohol		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
Methanol	67-56-1	EC50 (96 h) =22000 mg/L (Pseudokirchnerella subcapitata)	LC50(96 h)=15400 mg/L (Lepomis macrochirus) EC50 (200h)=14536 mg/L	No information available	NOEC(21 d)=208 mg/L (Daphnia magna) EC50 (48h)=22200 mg/L

		NOEC (8 d) =8000 mg/L (Scenedesmus quadricauda)	(Oryzias latipes)		(Daphnia obtuse)
Modified Tall Oil	Proprietary	No information available	No information available	No information available	No information available
Ethylene glycol	107-21-1	EC50 (72h) 6500 - 13000 mg/L (Selenastrum capricornutum)	LC50 (96h) 72860 mg/L (Pimephales promelas) NOEC (7d) 15380 mg/L (Pimephales promelas)	No information available	EC50(48 hr)>100 mg/L (Daphnia magna) NOEC (7d) 8590 mg/L(Ceriodaphnia dubia)
Phosphonic Acid Salt	Proprietary	No information available	No information available	No information available	No information available
Morpholine process residues	Proprietary	EC50 (72 h) =100 mg/L (Skeletonema costatum) EC50 (72 h) >120 mg/L (Desmodesmus subspicatus) NOEC (72 h) >120 mg/L (Desmodesmus subspicatus)	LC50 (96 h) >100 mg/L (Scophthalmus maximus) LC50 (96 h) =681.1 mg/L (Leuciscus idus)	EC50 (3h) > 1000 mg/L (activated sludge)	LC50 (48 h) =287.2 mg/L (Acartia tonsa) EC50 (48 h) >120 mg/L (Daphnia Magna)
Quaternary ammonium compound	Proprietary	EC50(96 h)=0.03 mg/L (Pseudokirchneriella subcapitata)	LC50(96 h)=0.28 mg/L (Pimephales promelas)	No information available	EC50(48 h)=0.016 mg/L (Daphnia magna) NOEC(21 d)=0.00415 mg/L (Daphnia magna)
Organic Alcohol	Proprietary	EC50 (72h) 12 mg/L (Desmodesmus subspicatus) EC50 (72h) 19 mg/L (Desmodesmus subspicatus)	LC50 (96h) 37 mg/L (Leuciscus idus) LC50 (96h) 46 mg/L (Leuciscus idus) LC50 (96h) 46-100 mg/L (Leuciscus idus) LC50 (96h) 46-100 mg/L (Carassius carassius auratis)	No information available	EC50 (48h) 0.4 mg/L (Daphnia magna) NOEC (21d) 0.0632 mg/L (Daphnia magna)

12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Methanol	67-56-1	Readily biodegradable (95% @ 20d)
Modified Tall Oil	Proprietary	Readily biodegradable
Ethylene glycol	107-21-1	Readily biodegradable (100% @ <4d)
Phosphonic Acid Salt	Proprietary	No information available
Morpholine process residues	Proprietary	(10.2% @ 28d)
Quaternary ammonium compound	Proprietary	(88.9% in 28 days (OECD 301B)% @ 28d)
Organic Alcohol	Proprietary	Not readily biodegradable (15-21% @ 28d)

12.3. Bioaccumulative potential

Substances	CAS Number	Bioaccumulation
Methanol	67-56-1	Not Bioaccumulative; BCF=1
Modified Tall Oil	Proprietary	No information available
Ethylene glycol	107-21-1	LogKow-1.36
Phosphonic Acid Salt	Proprietary	No information available
Morpholine process residues	Proprietary	Log Pow <1
Quaternary ammonium compound	Proprietary	0.04
Organic Alcohol	Proprietary	-0.056

12.4. Mobility in soil

Substances	CAS Number	Mobility
Methanol	67-56-1	No information available
Modified Tall Oil	Proprietary	No information available
Ethylene glycol	107-21-1	No information available
Phosphonic Acid Salt	Proprietary	No information available
Morpholine process residues	Proprietary	No information available
Quaternary ammonium compound	Proprietary	No information available
Organic Alcohol	Proprietary	KOC = 1.325

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 Not restricted
UN proper shipping name: Not restricted
Transport Hazard Class(es): Not applicable
Packing Group: Not applicable
Environmental Hazards: Not applicable

Canadian TDG

UN Number Not restricted
UN proper shipping name: Not restricted
Transport Hazard Class(es): Not applicable
Packing Group: Not applicable
Environmental Hazards: Not applicable

IMDG/IMO

UN Number Not restricted
UN proper shipping name: Not restricted
Transport Hazard Class(es): Not applicable
Packing Group: Not applicable
Environmental Hazards: Not applicable

IATA/ICAO

UN Number Not restricted
UN proper shipping name: Not restricted
Transport Hazard Class(es): Not applicable
Packing Group: Not applicable
Environmental Hazards: Not applicable

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
Methanol	67-56-1	Not applicable	Not applicable
Modified Tall Oil	Proprietary	Not applicable	Not applicable
Ethylene glycol	107-21-1	Not applicable	Not applicable
Phosphonic Acid Salt	Proprietary	Not applicable	Not applicable
Morpholine process residues	Proprietary	76 FR 65579, Oct 21, 2011	Not applicable

Quaternary ammonium compound	Proprietary	Not applicable	Not applicable
Organic Alcohol	Proprietary	Not applicable	Not applicable

EPA SARA Title III Extremely Hazardous Substances

Substances	CAS Number	EPA SARA Title III Extremely Hazardous Substances
Methanol	67-56-1	Not applicable
Modified Tall Oil	Proprietary	Not applicable
Ethylene glycol	107-21-1	Not applicable
Phosphonic Acid Salt	Proprietary	Not applicable
Morpholine process residues	Proprietary	Not applicable
Quaternary ammonium compound	Proprietary	Not applicable
Organic Alcohol	Proprietary	Not applicable

EPA SARA (311,312) Hazard Class

Acute toxicity (any route of exposure)
Skin Corrosion or Irritation
Respiratory or Skin Sensitization
Serious eye damage or eye irritation
Specific target organ toxicity (single or repeated exposure)

EPA SARA (313) Chemicals:

Substances	CAS Number	Toxic Release Inventory (TRI) - Group I	Toxic Release Inventory (TRI) - Group II
Methanol	67-56-1	1.0%	Not applicable
Modified Tall Oil	Proprietary	Not applicable	Not applicable
Ethylene glycol	107-21-1	1.0%	Not applicable
Phosphonic Acid Salt	Proprietary	Not applicable	Not applicable
Morpholine process residues	Proprietary	Not applicable	Not applicable
Quaternary ammonium compound	Proprietary	Not applicable	Not applicable
Organic Alcohol	Proprietary	Not applicable	Not applicable

EPA CERCLA/Superfund Reportable Spill Quantity

Substances	CAS Number	CERCLA RQ
Methanol	67-56-1	5000 lb 2270 kg
Modified Tall Oil	Proprietary	Not applicable
Ethylene glycol	107-21-1	5000 lb 2270 kg
Phosphonic Acid Salt	Proprietary	Not applicable
Morpholine process residues	Proprietary	Not applicable
Quaternary ammonium compound	Proprietary	Not applicable
Organic Alcohol	Proprietary	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
Methanol	67-56-1	developmental toxicity
Modified Tall Oil	Proprietary	Not applicable
Ethylene glycol	107-21-1	developmental toxicity
Phosphonic Acid Salt	Proprietary	Not applicable
Morpholine process residues	Proprietary	Not applicable
Quaternary ammonium compound	Proprietary	Not applicable
Organic Alcohol	Proprietary	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
Methanol	67-56-1	Present	Present	Environmental hazard
Modified Tall Oil	Proprietary	Not applicable	Not applicable	Not applicable
Ethylene glycol	107-21-1	Present	Present	Environmental hazard
Phosphonic Acid Salt	Proprietary	Not applicable	Not applicable	Not applicable

Morpholine process residues	Proprietary	Not applicable	Not applicable	Not applicable
Quaternary ammonium compound	Proprietary	Not applicable	Not applicable	Not applicable
Organic Alcohol	Proprietary	Present	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: 29-Sep-2021

Reason for Revision SDS sections updated:
2
4
8
12
15

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/

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End of Safety Data Sheet