multi-chem®
A HALLIBURTON SERVICE

SAFETY DATA SHEET

Product Trade Name: **MC MX 8-2248**

Revision Date: 07-Jun-2019 **Revision Number:** 3

1. Identification

1.1. Product Identifier

Product Trade Name: MC MX 8-2248
Synonyms None
Chemical Family: Blend
Internal ID Code MC002258

1.2 Recommended use and restrictions on use

Application: Iron Sulfide Dissolver
Uses advised against Consumer use

1.3 Manufacturer's Name and Contact Details

Manufacturer/Supplier
Multi-Chem Group LLC
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
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 (accessible 24 hours a day / 7 days a week)
Global Incident Response Access Code: 334305
Contract Number: 14012

2. Hazards Identification

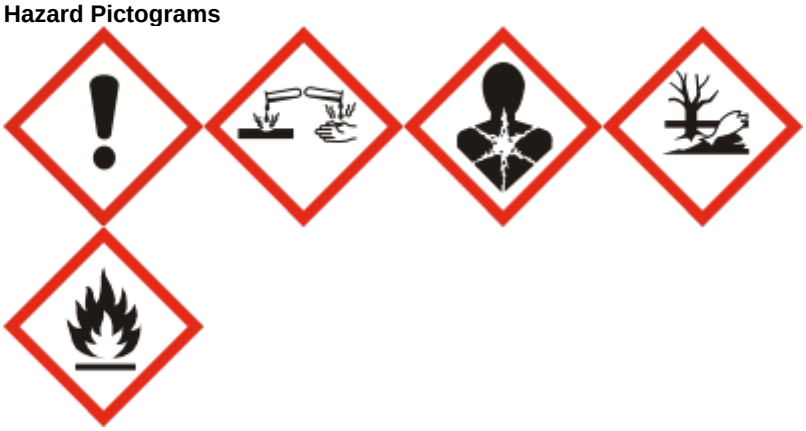
2.1 Classification in accordance with paragraph (d) of §1910.1200

Acute Oral Toxicity	Category 4 - H302
Acute inhalation toxicity - vapor	Category 4 - H332
Serious Eye Damage/Irritation	Category 1 - H318
Skin Sensitization	Category 1 - H317
Reproductive Toxicity	Category 1B - H360
Specific Target Organ Toxicity - (Single Exposure)	Category 1 - H370
Specific Target Organ Toxicity - (Repeated Exposure)	Category 2 - H373
Acute Aquatic Toxicity	Category 2 - H401

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
H317 - May cause an allergic skin reaction
H318 - Causes serious eye damage
H332 - Harmful if inhaled
H360 - May damage fertility or the unborn child
H370 - Causes damage to organs
H373 - May cause damage to organs through prolonged or repeated exposure
H401 - 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, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 - Keep container tightly closed
P240 - Ground and bond container and receiving equipment.
P241 - Use explosion-proof electrical/ventilating/lighting/equipment
P242 - Use only non-sparking tools
P243 - Take action to prevent static discharges.
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
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

P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
P330 - Rinse mouth
P302 + P352 - IF ON SKIN: Wash with plenty of water.
P363 - Wash contaminated clothing before reuse
P304 + P340 - IF INHALED: Remove person to fresh air and keep 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 P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
Storage	P403 + P235 - Store in a well-ventilated place. Keep cool 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
Phosphonium, tetrakis(hydroxymethyl)-, sulfate (2:1)	55566-30-8	10 - 30%	Acute Tox. 4 (H302) Acute Tox. 3 (H331) Eye Corr. 1 (H318) Skin Sens. 1 (H317) Repr. 2 (H361) 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)
Ammonium chloride	12125-02-9	1 - 5%	Acute Tox. 4 (H302) Eye Irrit. 2 (H319) Aquatic Acute 3 (H402)
Alkylphenol alkoxylated, #1	Proprietary	1 - 5%	Skin Irrit. 2 (H315) Eye Corr. 1 (H318) STOT SE 2 (H371) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)

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	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	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. Harmful if inhaled. Causes severe eye irritation which may damage tissue. May cause allergic skin reaction. Potential reproductive hazard. May cause birth defects. May cause damage to internal organs. May cause damage to organs through prolonged or repeated exposure.

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

Notes to Physician 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. 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
Phosphonium, tetrakis(hydroxymethyl)-, sulfate (2:1)	55566-30-8	Not applicable	TWA: 2 mg/m^3
Methanol	67-56-1	TWA: 200 ppm TWA: 260 mg/m^3	TWA: 200 ppm STEL: 250 ppm
Ammonium chloride	12125-02-9	Not applicable	TWA: 10 mg/m^3 STEL: 20 mg/m^3
Alkylphenol alkoxylated, #1	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.

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 protective clothing appropriate for the work environment.

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
Odor: Mild

Color Clear to Slightly Hazy
Odor Threshold: No information available

Property	Values	Remarks/ - Method
pH:	3.0-4.0	(10% in 1:1 IPA:H2O)
Freezing Point / Range	-17.8 °C / 0 °F	
Melting Point / Range	No data available	
Pour Point / Range	No data available -23 °C -10 °F	
Boiling Point / Range	No data available	
Flash Point	44.4 °C / 112 °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	1.077 (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	8.99 lb/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 sulfur. Oxides of phosphorus. Oxides of nitrogen.

11. Toxicological Information

11.1 Information on likely routes of exposure

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

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. Harmful if inhaled.
Eye Contact	Causes serious eye damage.
Skin Contact	May cause mild skin irritation. May cause an allergic skin reaction.
Ingestion	Ingestion of this product may cause blindness due to the presence of methanol. Harmful if swallowed.

Chronic Effects/Carcinogenicity May cause birth defects. Contains known or suspected reproductive toxins. May

cause damage to organs through prolonged or repeated exposure.

11.3 Toxicity data

Toxicology data for the components

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Phosphonium, tetrakis(hydroxymethyl)-, sulfate (2:1)	55566-30-8	575 mg/kg-bw (rat)	>4084 mg/kg (24 hrs, rabbit)	0.628 mg/L (male rat, aerosol) 0.551 mg/L (female rat, aerosol)
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)
Ammonium chloride	12125-02-9	1410 mg/kg bw (rat)	> 2000 mg/kg (Rat)	No data available
Alkylphenol alkoxylated, #1	Proprietary	2000 - 5000 mg/kg (Rat) (Similar substance)	> 2000 mg/kg (Rabbit) (similar substance)	No data available

Substances	CAS Number	Skin corrosion/irritation
Phosphonium, tetrakis(hydroxymethyl)-, sulfate (2:1)	55566-30-8	No data of sufficient quality are available.
Methanol	67-56-1	Non-irritating to the skin (Rabbit)
Ammonium chloride	12125-02-9	Non-irritating to the skin (Rabbit)
Alkylphenol alkoxylated, #1		Causes moderate skin irritation. (Rabbit)

Substances	CAS Number	Serious eye damage/irritation
Phosphonium, tetrakis(hydroxymethyl)-, sulfate (2:1)	55566-30-8	Causes severe eye irritation
Methanol	67-56-1	Non-irritating to the eye (Rabbit)
Ammonium chloride	12125-02-9	Causes moderate eye irritation (Rabbit)
Alkylphenol alkoxylated, #1		Causes severe eye irritation which may damage tissue. (Rabbit)

Substances	CAS Number	Skin Sensitization
Phosphonium, tetrakis(hydroxymethyl)-, sulfate (2:1)	55566-30-8	Shown to be strong sensitizer in animal (guinea pig) studies.
Methanol	67-56-1	Did not cause sensitization on laboratory animals (guinea pig)
Ammonium chloride	12125-02-9	Did not cause sensitization on laboratory animals (guinea pig)
Alkylphenol alkoxylated, #1		Patch test on human volunteers did not demonstrate sensitization properties

Substances	CAS Number	Respiratory Sensitization
Phosphonium, tetrakis(hydroxymethyl)-, sulfate (2:1)	55566-30-8	No information available
Methanol	67-56-1	No information available
Ammonium chloride	12125-02-9	No information available
Alkylphenol alkoxylated, #1		No information available

Substances	CAS Number	Mutagenic Effects
Phosphonium, tetrakis(hydroxymethyl)-, sulfate (2:1)	55566-30-8	While some in vitro tests were positive and/or equivocal, in vivo results were negative. (similar substances)
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.
Ammonium chloride	12125-02-9	Not regarded as mutagenic.
Alkylphenol alkoxylated, #1		In vitro tests did not show mutagenic effects. (similar substances)

Substances	CAS Number	Carcinogenic Effects
Phosphonium, tetrakis(hydroxymethyl)-, sulfate (2:1)	55566-30-8	Not regarded as carcinogenic.
Methanol	67-56-1	No data of sufficient quality are available.
Ammonium chloride	12125-02-9	Did not show carcinogenic effects in animal experiments
Alkylphenol alkoxylated, #1		Did not show carcinogenic or teratogenic effects in animal experiments (similar substances)

Substances	CAS Number	Reproductive toxicity

Phosphonium, tetrakis(hydroxymethyl)-, sulfate (2:1)	55566-30-8	Adverse developmental effects were only observed at maternally toxic doses.
Methanol	67-56-1	Experiments have shown reproductive toxicity effects on laboratory animals
Ammonium chloride	12125-02-9	Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments. (similar substances)
Alkylphenol alkoxylated, #1		Not a confirmed teratogen or embryotoxin. (similar substances)

Substances	**CAS Number**	**STOT - single exposure**
Phosphonium, tetrakis(hydroxymethyl)-, sulfate (2:1)	55566-30-8	No data of sufficient quality are available.
Methanol	67-56-1	May cause disorder and damage to the Central Nervous System (CNS)
Ammonium chloride	12125-02-9	No information available
Alkylphenol alkoxylated, #1		May cause disorder and damage to the Central Nervous System (CNS)

Substances	**CAS Number**	**STOT - repeated exposure**
Phosphonium, tetrakis(hydroxymethyl)-, sulfate (2:1)	55566-30-8	May cause disorder and damage to the (Liver) No data of sufficient quality are available.
Methanol	67-56-1	No data of sufficient quality are available.
Ammonium chloride	12125-02-9	No significant toxicity observed in animal studies at concentration requiring classification.
Alkylphenol alkoxylated, #1		No significant toxicity observed in animal studies at concentration requiring classification.

Substances	**CAS Number**	**Aspiration hazard**
Phosphonium, tetrakis(hydroxymethyl)-, sulfate (2:1)	55566-30-8	Not applicable
Methanol	67-56-1	No information available
Ammonium chloride	12125-02-9	Not applicable
Alkylphenol alkoxylated, #1		Not applicable

12. Ecological Information

12.1. Toxicity

Ecotoxicity effects

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

Substance Ecotoxicity Data

Substances	CAS Number	**Toxicity to Algae**	**Toxicity to Fish**	**Toxicity to Microorganisms**	**Toxicity to Invertebrates**
Phosphonium, tetrakis(hydroxymethyl)-, sulfate (2:1)	55566-30-8	EC50(72 h)=0.47 mg/L (Skeletonema costatum)	LC50(96 h)=94 mg/L (Oncorhynchus mykiss) LC50(96 h)=97 mg/L (Lepomis macrochirus)	No information available	LC50(48 h)=0.39 mg/L (Acartia tonsa) EC50(48 h)=15 mg/L (Daphnia magna)
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 (200h)=14536 mg/L (Oryzias latipes)	No information available	NOEC(21 d)=208 mg/L (Daphnia magna) EC50 (48h)=22200 mg/L (Daphnia obtuse)
Ammonium chloride	12125-02-9	EC50 (5d) 1300 mg/L (Chlorella vulgaris)	LC50 (96h) 34.6 mg/L (Oncorhynchus mykiss) NOEC (28d) 11.8 mg/L (Pimephales promelas)	EC50 (0.5h) 1618 mg/L (activated sludge, domestic)	LC50 (96h) > 100 mg/L (Gammarus fasciatus) EC10 (70d) 0.66 mg/L (Hyalella azteka)
Alkylphenol alkoxylated, #1	Proprietary	EC50 (72h) > 3 mg/L (Pseudokirchnerella subcapitata) (similar substance)	LC50 (96h) 0.323 mg/L (Pimephales promelas) (similar substance)	EC50 (3h) 104 mg/L (Activated sludge) (similar substance)	LC50 (48h) 0.148 mg/L (Daphnia magna) (similar substance) NOEC (21d) 0.1 mg/L (Daphnia magna) (similar substance)

12.2. Persistence and degradability

Substances	**CAS Number**	**Persistence and Degradability**

Phosphonium, tetrakis(hydroxymethyl)-, sulfate (2:1)	55566-30-8	Inherently biodegradable (> 20%)
Methanol	67-56-1	Readily biodegradable (95% @ 20d)
Ammonium chloride	12125-02-9	The methods for determining biodegradability are not applicable to inorganic substances.
Alkylphenol alkoxylated, #1	Proprietary	Readily biodegradable (81% @ 28d) (similar substances)

12.3. Bioaccumulative potential

Substances	CAS Number	Bioaccumulation
Phosphonium, tetrakis(hydroxymethyl)-, sulfate (2:1)	55566-30-8	Log Pow= -9.8
Methanol	67-56-1	Not Bioaccumulative; BCF=1
Ammonium chloride	12125-02-9	No information available
Alkylphenol alkoxylated, #1	Proprietary	3.59-4.24

12.4. Mobility in soil

Substances	CAS Number	Mobility
Phosphonium, tetrakis(hydroxymethyl)-, sulfate (2:1)	55566-30-8	No information available
Methanol	67-56-1	No information available
Ammonium chloride	12125-02-9	No information available
Alkylphenol alkoxylated, #1	Proprietary	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 Dispose of container according to national or local regulations.

14. Transport Information

US DOT

UN Number UN1993
UN proper shipping name: Flammable Liquid, N.O.S. (Contains Methanol)
Transport Hazard Class(es): 3
Packing Group: III
Environmental Hazards: Marine Pollutant (Contains Phosphonium Salts, Ethoxylated alcohols)
NAERG: NAERG 128

Canadian TDG

UN Number UN1993
UN proper shipping name: Flammable Liquid, N.O.S. (Contains Methanol)
Transport Hazard Class(es): 3
Packing Group: III
Environmental Hazards: Marine Pollutant (Contains Phosphonium Salts, Ethoxylated alcohols)

IMDG/IMO

UN Number UN1993
UN proper shipping name: Flammable Liquid, N.O.S. (Contains Methanol)
Transport Hazard Class(es): 3
Packing Group: III
Environmental Hazards: Marine Pollutant (Contains Phosphonium Salts, Ethoxylated alcohols)
EMS: EmS F-E, S-E

IATA/ICAO

UN Number UN1993
UN proper shipping name: Flammable Liquid, N.O.S. (Contains Methanol)
Transport Hazard Class(es): 3
Packing Group: III
Environmental Hazards: Marine Pollutant (Contains Phosphonium Salts, Ethoxylated alcohols)

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
Phosphonium, tetrakis(hydroxymethyl)-, sulfate (2:1)	55566-30-8	Not applicable	Not applicable
Methanol	67-56-1	Not applicable	Not applicable
Ammonium chloride	12125-02-9	Not applicable	Not applicable
Alkylphenol alkoxylated, #1	Proprietary	Not applicable	Not applicable

EPA SARA Title III Extremely Hazardous Substances

Substances	CAS Number	EPA SARA Title III Extremely Hazardous Substances
Phosphonium, tetrakis(hydroxymethyl)-, sulfate (2:1)	55566-30-8	Not applicable
Methanol	67-56-1	Not applicable
Ammonium chloride	12125-02-9	Not applicable
Alkylphenol alkoxylated, #1	Proprietary	Not applicable

EPA SARA (311,312) Hazard Class

Flammable (gases, aerosols, liquids, or solids)
Acute toxicity (any route of exposure)
Respiratory or Skin Sensitization
Serious eye damage or eye irritation
Specific target organ toxicity (single or repeated exposure)
Reproductive toxicity

EPA SARA (313) Chemicals

Substances	CAS Number	Toxic Release Inventory (TRI) - Group I	Toxic Release Inventory (TRI) - Group II
Phosphonium, tetrakis(hydroxymethyl)-, sulfate (2:1)	55566-30-8	Not applicable	Not applicable
Methanol	67-56-1	1.0%	Not applicable
Ammonium chloride	12125-02-9	1.0%	Not applicable
Alkylphenol alkoxylated, #1	Proprietary	Not applicable	Not applicable

EPA CERCLA/Superfund Reportable Spill Quantity

Substances	CAS Number	CERCLA RQ
Phosphonium, tetrakis(hydroxymethyl)-, sulfate (2:1)	55566-30-8	Not applicable
Methanol	67-56-1	5000 lb 2270 kg
Ammonium chloride	12125-02-9	5000 lb 2270 kg
Alkylphenol alkoxylated, #1	Proprietary	Not applicable

EPA RCRA Hazardous Waste Classification

Ignitability D001

California Proposition 65

Substances	CAS Number	California Proposition 65
Phosphonium, tetrakis(hydroxymethyl)-, sulfate (2:1)	55566-30-8	Not applicable
Methanol	67-56-1	developmental toxicity
Ammonium chloride	12125-02-9	Not applicable
Alkylphenol alkoxylated, #1	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
Phosphonium, tetrakis(hydroxymethyl)-, sulfate (2:1)	55566-30-8	Not applicable	Present	Not applicable
Methanol	67-56-1	Present	Present	Environmental hazard
Ammonium chloride	12125-02-9	Present	Present	Environmental hazard
Alkylphenol alkoxylated, #1	Proprietary	Not applicable	Not applicable	Not applicable

NFPA Ratings: Health 2, Flammability 2, Reactivity 0
HMIS Ratings: Health 2*, Flammability 2, 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
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Revision Date: 07-Jun-2019

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/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