multi-chem®
A HALLIBURTON SERVICE

SAFETY DATA SHEET

Product Trade Name: **MC MX 3-4757**

Revision Date: 06-Nov-2018 **Revision Number:** 1

1. Identification

1.1. Product Identifier

Product Trade Name: MC MX 3-4757
Synonyms None
Chemical Family: Blend
Internal ID Code MC005808

1.2 Recommended use and restrictions on use

Application: Paraffin Inhibitor
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
Global Incident Response Access Code: 334305
Contract Number: 14012

2. Hazards Identification

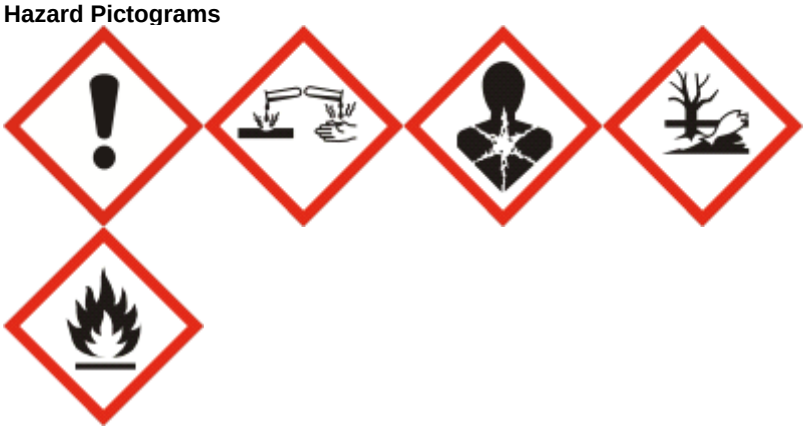
2.1 Classification in accordance with paragraph (d) of §1910.1200

Aspiration Toxicity	Category 1 - H304
Skin Corrosion / Irritation	Category 1 - H314
Serious Eye Damage/Irritation	Category 1 - H318
Skin Sensitization	Category 1 - H317
Germ Cell Mutagenicity	Category 1B - H340
Carcinogenicity	Category 1B - H350

Reproductive Toxicity	Category 2 - H361
Specific Target Organ Toxicity - (Single Exposure)	Category 3 - H335 + H336
Specific Target Organ Toxicity - (Repeated Exposure)	Category 1 - H372
Acute Aquatic Toxicity	Category 1 - H400
Chronic Aquatic Toxicity	Category 2 - H411
Flammable liquids.	Category 2 - H225

2.2. Label Elements

Hazard Pictograms



Signal Word: Danger

Hazard Statements

H225 - Highly flammable liquid and vapor
H304 - May be fatal if swallowed and enters airways
H314 - Causes severe skin burns and eye damage
H317 - May cause an allergic skin reaction
H318 - Causes serious eye damage
H335 - May cause respiratory irritation
H336 - May cause drowsiness or dizziness
H340 - May cause genetic defects
H350 - May cause cancer
H361 - Suspected of damaging fertility or the unborn child
H372 - Causes damage to organs through prolonged or repeated exposure
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, 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 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or

	doctor/physician P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting 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
Storage	P403 + P233 - Store in a well-ventilated place. Keep container tightly closed 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
Xylene	1330-20-7	30 - 60%	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) STOT SE 3 (H335) Asp. Tox. 1 (H304) Aquatic Acute 2 (H401) Flam. Liq. 3 (H226)
Naphtha (petroleum), hydrotreated light	64742-49-0	10 - 30%	Skin Irrit. 2 (H315) Repr. 2 (H361) STOT SE 3 (H336) STOT RE 2 (H373) Asp. Tox. 1 (H304) Aquatic Acute 2 (H401) Aquatic Chronic 2 (H411) Flam. Liq. 2 (H225)
Ethyl benzene	100-41-4	10 - 30%	Acute Tox. 4 (H332) Eye Irrit. 2B (H320) STOT SE 3 (H336) STOT RE 2 (H373) Asp. Tox. 1 (H304) Aquatic Acute 2 (H401) Aquatic Chronic 3 (H412) Flam. Liq. 2 (H225)
Hexane	110-54-3	10 - 30%	Skin Irrit. 2 (H315) Repr. 2 (H361) STOT SE 3 (H336) STOT RE 1 (H372) Asp. Tox. 1 (H304) Aquatic Acute 2 (H401) Aquatic Chronic 2 (H411) Flam. Liq. 2 (H225)
Alkylphenol	Proprietary	5 - 10%	Acute Tox. 4 (H302) Skin Corr. 1 (H314) Eye Corr. 1 (H318) Repr. 2 (H361) STOT SE 3 (H335) Aquatic Acute 1 (H400)

			Aquatic Chronic 1 (H410)
Amine Polymer	Proprietary	5 - 10%	Skin Irrit. 2 (H315) Eye Irrit. 2A (H319)
Methylcyclopentane	96-37-7	1 - 5%	Skin Irrit. 2 (H315) STOT SE 3 (H336) Asp. Tox. 1 (H304) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) Flam. Liq. 2 (H225)
Heavy aromatic petroleum naphtha	64742-94-5	1 - 5%	Asp. Tox. 1 (H304) STOT SE 3 (H336) Aquatic Acute 2 (H401) Aquatic Chronic 2 (H411)
Light aromatic solvent	64742-95-6	0.1 - 1%	Skin Irrit. 2 (H315) Muta. 1B (H340) Carc. 1B (H350) STOT SE 3 (H336) Asp. Tox. 1 (H304) Aquatic Acute 2 (H401) Aquatic Chronic 3 (H412) Flam. Liq. 3 (H226)
Phenol	Proprietary	0.1 - 1%	Acute Tox. 4 (H302) Skin Corr. 1 (H314) Eye Corr. 1 (H318) Repr. 2 (H361) STOT SE 3 (H335) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)
Pyridinium Salt #1	Proprietary	0.1 - 1%	Acute Tox. 4 (H302) Acute Tox. 3 (H311) Acute Tox. 3 (H331) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Skin Sens. 1 (H317) Aquatic Acute 2 (H401) Flam. Liq. 4 (H227)
Naphthalene	91-20-3	0.1 - 1%	Acute Tox. 4 (H302) Carc. 2 (H351) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) Flam. Sol. 2 (H228)

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 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 30 minutes and remove contaminated clothing, shoes and leather goods immediately. Get medical attention immediately.

Ingestion 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

Aspiration into the lungs may cause chemical pneumonitis including coughing, difficulty breathing, wheezing, coughing up blood and pneumonia, which can be fatal. Causes severe skin irritation with tissue destruction. Causes severe eye irritation which may damage tissue. May cause allergic skin reaction. May cause heritable genetic damage. Carcinogen. May cause birth defects. Potential reproductive hazard. May cause respiratory irritation. May cause headache, dizziness, and other central nervous system effects. 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 Aspiration may cause severe lung damage. Evacuate stomach in a way which avoids aspiration.

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
Xylene	1330-20-7	TWA: 100 ppm TWA: 435 mg/m^3	TWA: 100 ppm STEL: 150 ppm
Naphtha (petroleum), hydrotreated light	64742-49-0	Not applicable	Not applicable
Ethyl benzene	100-41-4	TWA: 100 ppm TWA: 435 mg/m^3	TWA: 20 ppm
Hexane	110-54-3	TWA: 500 ppm TWA: 1800 mg/m^3	TWA: 50 ppm
Alkylphenol	Proprietary	Not applicable	Not applicable
Amine Polymer	Proprietary	Not applicable	Not applicable
Methylcyclopentane	96-37-7	Not applicable	Not applicable
Heavy aromatic petroleum naphtha	64742-94-5	Not applicable	Not applicable
Light aromatic solvent	64742-95-6	Not applicable	Not applicable
Phenol	Proprietary	Not applicable	Not applicable
Pyridinium Salt #1	Proprietary	Not applicable	Not applicable
Naphthalene	91-20-3	TWA: 10 ppm TWA: 50 mg/m^3	TWA: 10 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: Pungent
Color Clear Light Amber to Dark Amber
Odor Threshold: No information available

Property Remarks/ - Method	Values
pH:	6-7 (10% in 1:1 IPA:H2O)
Freezing Point / Range	No data available
Melting Point / Range	No data available
Pour Point / Range	-18 to -12 °C / 0 to 10 °F
Boiling Point / Range	No data available
Flash Point	4.4 °C / 40 °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	0.8275 - 0.8525 (20 °C/68 °F)
Water Solubility	Insoluble in water
Solubility in other solvents	Oil soluble
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	6.89 - 7.11 lbs/gal
Bulk Density	827 - 853 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
Keep away from heat, sparks and flame.

10.5. Incompatible materials
Strong oxidizers. Strong acids. Strong alkalis.

10.6. Hazardous decomposition products
Carbon oxides. Fumes of aromatic hydrocarbons. Oxides of nitrogen.

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 respiratory irritation. May cause central nervous system depression including headache, dizziness, drowsiness, incoordination, slowed reaction time, slurred speech, giddiness and unconsciousness.

Eye Contact Causes serious eye damage.

Skin Contact Causes severe burns. May cause an allergic skin reaction.

Ingestion May be fatal if swallowed and enters airways. Causes burns of the mouth, throat and stomach.

Chronic Effects/Carcinogenicity May cause heritable genetic damage. Contains known or suspected carcinogens. Contains known or suspected reproductive toxins. Causes 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**
Xylene	1330-20-7	3523 mg/kg bw (Rat)	>4200 mg/kg (rabbit)	27.6 mg/L (Rat, 4h, vapor)
Naphtha (petroleum), hydrotreated light	64742-49-0	> 5000 mg/kg (Rat)	3160 mg/kg (Rabbit) > 3350 mg/kg (Rabbit)	73680 ppm (Rat) 4 h >20 mg/L (Rat) 4h
Ethyl benzene	100-41-4	3500 mg/kg-bw (rat)	15400 mg/kg (rabbit)	17.8 mg/L (Rat, 4h, vapor)
Hexane	110-54-3	25,000 mg/kg (Rat) 16,000 mg/kg (Rat)	3000 mg/kg (Rabbit) >2000 mg/kg (Rabbit)	48000 ppm (Rat) 4h >17,600 mg/m³ (Rat) 24h
Alkylphenol	Proprietary	1412 mg/kg (Rat)	2031 mg/kg-bw (rabbit)	No data available
Amine Polymer	Proprietary	No data available	No data available	No data available
Methylcyclopentane	96-37-7	3200 mg/kg (rat) (similar substance)	>2000 mg/kg (rat) (similar substance)	>40 mg/L 2h (mouse)
Heavy aromatic petroleum naphtha	64742-94-5	>5000 mg/kg-bw (rat)	>2000 mg/kg-bw (rabbit)	> 4.778 mg/L (rat, 4 h, vapour, saturated)
Light aromatic solvent	64742-95-6	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 8.53 mg/L (vapor, 4 hr, rat)
Phenol	Proprietary	1412 mg/kg (Rat) (similar substance)	2031 mg/kg (Rabbit) (similar substance)	No data available
Pyridinium Salt #1	Proprietary	1377 mg/kg bw (rat) (similar substance)	1000 mg/kg-bw (rabbit) (similar substance)	2.67 mg/L (rat, 4h, vapor) (similar substance)
Naphthalene	91-20-3	490 mg/kg (Rat) 1110 mg/kg (Rat)	1120 mg/kg (Rabbit) 20 g/kg (Rabbit)	340 mg/m³ (Rat) 1 h

Substances	**CAS Number**	**Skin corrosion/irritation**
Xylene	1330-20-7	Causes skin irritation.
Naphtha (petroleum), hydrotreated light	64742-49-0	Skin, rabbit: Causes moderate skin irritation.
Ethyl benzene	100-41-4	Causes mild skin irritation
Hexane	110-54-3	Prolonged skin contact may defat the skin and produce dermatitis
Alkylphenol		Skin, rabbit: Causes burns
Amine Polymer		May cause moderate skin irritation.
Methylcyclopentane	96-37-7	May cause irritation.
Heavy aromatic petroleum naphtha	64742-94-5	Non-irritating to the skin (Rabbit) (similar substances)
Light aromatic solvent	64742-95-6	Causes moderate skin irritation. (Rabbit)
Phenol		Skin, rabbit: Causes burns (similar substances)
Pyridinium Salt #1		Skin, rabbit: Causes moderate skin irritation. (similar substances) Irritating to skin.
Naphthalene	91-20-3	Non-irritating to the skin (Rabbit)

Substances	**CAS Number**	**Serious eye damage/irritation**
Xylene	1330-20-7	Causes moderate eye irritation (Rabbit)
Naphtha (petroleum), hydrotreated light	64742-49-0	Eye, rabbit: Non-irritating to the eye
Ethyl benzene	100-41-4	Causes mild eye irritation.
Hexane	110-54-3	Non-irritating to rabbit's eye
Alkylphenol		Eye, rabbit: Causes burns Causes severe eye irritation which may damage tissue.
Amine Polymer		May cause eye irritation
Methylcyclopentane	96-37-7	Non-irritating to rabbit's eye (similar substances)
Heavy aromatic petroleum	64742-94-5	Non-irritating to rabbit's eye (similar substances)

naphtha		
Light aromatic solvent	64742-95-6	Non-irritating to rabbit's eye
Phenol		Eye, rabbit: Causes burns (similar substances)
Pyridinium Salt #1		Causes severe eye irritation (similar substances) Causes moderate eye irritation Eye, rabbit:
Naphthalene	91-20-3	May cause mechanical irritation to eye. (human) Non-irritating to rabbit's eye

Substances	CAS Number	Skin Sensitization
Xylene	1330-20-7	Did not cause sensitization on laboratory animals (mouse)
Naphtha (petroleum), hydrotreated light	64742-49-0	Did not cause sensitization on laboratory animals (guinea pig) (mouse)
Ethyl benzene	100-41-4	Not regarded as a sensitizer.
Hexane	110-54-3	Did not cause sensitization on laboratory animals (mouse)
Alkylphenol		Did not cause sensitization on laboratory animals (guinea pig)
Amine Polymer		No information available
Methylcyclopentane	96-37-7	Did not cause sensitization on laboratory animals (guinea pig) (similar substances)
Heavy aromatic petroleum naphtha	64742-94-5	Patch test on human volunteers did not demonstrate sensitization properties Did not cause sensitization on laboratory animals (guinea pig) (similar substances)
Light aromatic solvent	64742-95-6	Did not cause sensitization on laboratory animals (guinea pig)
Phenol		Did not cause sensitization on laboratory animals (guinea pig) (similar substances)
Pyridinium Salt #1		May cause sensitization by skin contact (mouse) (similar substances)
Naphthalene	91-20-3	Did not cause sensitization on laboratory animals (guinea pig)

Substances	CAS Number	Respiratory Sensitization
Xylene	1330-20-7	No information available
Naphtha (petroleum), hydrotreated light	64742-49-0	No information available
Ethyl benzene	100-41-4	No information available
Hexane	110-54-3	No information available
Alkylphenol		No information available
Amine Polymer		No information available
Methylcyclopentane	96-37-7	No information available
Heavy aromatic petroleum naphtha	64742-94-5	No information available
Light aromatic solvent	64742-95-6	No information available
Phenol		No information available
Pyridinium Salt #1		No information available
Naphthalene	91-20-3	No information available

Substances	CAS Number	Mutagenic Effects
Xylene	1330-20-7	In vitro tests did not show mutagenic effects In vivo tests did not show mutagenic effects.
Naphtha (petroleum), hydrotreated light	64742-49-0	In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects.
Ethyl benzene	100-41-4	In vitro tests did not show mutagenic effects In vivo tests did not show mutagenic effects.
Hexane	110-54-3	In vitro tests did not show mutagenic effects In vivo tests did not show mutagenic effects.
Alkylphenol		In vitro tests did not show mutagenic effects (similar substances) In vivo tests did not show mutagenic effects.
Amine Polymer		No information available
Methylcyclopentane	96-37-7	In vitro tests did not show mutagenic effects
Heavy aromatic petroleum naphtha	64742-94-5	In vitro tests did not show mutagenic effects In vivo tests did not show mutagenic effects. (similar substances)
Light aromatic solvent	64742-95-6	Some in vivo tests have shown mutagenic effects. In vitro tests have shown mutagenic effects
Phenol		In vitro tests did not show mutagenic effects In vivo tests did not show mutagenic effects. (similar substances)
Pyridinium Salt #1		While some in vitro tests were positive and/or equivocal, in vivo results were negative. (similar substances)
Naphthalene	91-20-3	In vitro tests did not show mutagenic effects.

Substances	CAS Number	Carcinogenic Effects
Xylene	1330-20-7	Did not show carcinogenic effects in animal experiments
Naphtha (petroleum), hydrotreated light	64742-49-0	Not regarded as carcinogenic.
Ethyl benzene	100-41-4	Not regarded as carcinogenic.
Hexane	110-54-3	Not regarded as carcinogenic.
Alkylphenol		Not regarded as carcinogenic.
Amine Polymer		No information available

Methylcyclopentane	96-37-7	No information available
Heavy aromatic petroleum naphtha	64742-94-5	Did not show carcinogenic effects in animal experiments (similar substances) Not regarded as carcinogenic.
Light aromatic solvent	64742-95-6	Contains a known or suspected carcinogen
Phenol		Not regarded as carcinogenic. (similar substances)
Pyridinium Salt #1		No information available
Naphthalene	91-20-3	Substances which should be regarded as if they are carcinogenic to man

Substances	**CAS Number**	**Reproductive toxicity**
Xylene	1330-20-7	Did not show teratogenic effects in animal experiments. Animal testing did not show any effects on fertility.
Naphtha (petroleum), hydrotreated light	64742-49-0	This product may cause adverse reproductive effects
Ethyl benzene	100-41-4	Animal testing did not show any effects on fertility. Adverse developmental effects were only observed at maternally toxic doses.
Hexane	110-54-3	Experiments have shown reproductive toxicity effects on laboratory animals
Alkylphenol		Prolonged or repeated exposure may cause embryo and fetus toxicity. Prolonged or repeated exposure may cause reproductive system damage.
Amine Polymer		No information available
Methylcyclopentane	96-37-7	Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments. (similar substances)
Heavy aromatic petroleum naphtha	64742-94-5	Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments. (similar substances)
Light aromatic solvent	64742-95-6	No data of sufficient quality are available.
Phenol		Prolonged or repeated exposure may cause embryo and fetus toxicity. Prolonged or repeated exposure may cause reproductive system damage. Adverse developmental effects were only observed at maternally toxic doses. (similar substances)
Pyridinium Salt #1		Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments. (similar substances)
Naphthalene	91-20-3	Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments.

Substances	**CAS Number**	**STOT - single exposure**
Xylene	1330-20-7	May cause respiratory irritation.
Naphtha (petroleum), hydrotreated light	64742-49-0	May cause headache, dizziness, and other central nervous system effects.
Ethyl benzene	100-41-4	May cause anesthetic or narcotic effects. May cause disorder and damage to the Central Nervous System (CNS) May cause headache, dizziness, and other central nervous system effects.
Hexane	110-54-3	May cause headache, dizziness, and other central nervous system effects.
Alkylphenol		May cause disorder and damage to the Respiratory system.
Amine Polymer		No information available
Methylcyclopentane	96-37-7	May cause headache, dizziness, and other central nervous system effects.
Heavy aromatic petroleum naphtha	64742-94-5	May cause headache, dizziness, and other central nervous system effects.
Light aromatic solvent	64742-95-6	May cause headache, dizziness, and other central nervous system effects. No information available
Phenol		May cause respiratory irritation. (similar substances)
Pyridinium Salt #1		No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)
Naphthalene	91-20-3	No data of sufficient quality are available.

Substances	**CAS Number**	**STOT - repeated exposure**
Xylene	1330-20-7	No significant toxicity observed in animal studies at concentration requiring classification.
Naphtha (petroleum), hydrotreated light	64742-49-0	Causes damage to organs through prolonged or repeated exposure: Peripheral Nervous System (PNS)
Ethyl benzene	100-41-4	Causes damage to organs through prolonged or repeated exposure if inhaled: Ears
Hexane	110-54-3	Causes damage to organs through prolonged or repeated exposure: Central Nervous System (CNS)
Alkylphenol		No significant toxicity observed in animal studies at concentration requiring classification.
Amine Polymer		No information available
Methylcyclopentane	96-37-7	No significant toxicity observed in animal studies at concentration requiring classification.
Heavy aromatic petroleum naphtha	64742-94-5	No significant toxicity observed in animal studies at concentration requiring classification.
Light aromatic solvent	64742-95-6	No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)
Phenol		No significant toxicity observed in animal studies at concentration requiring classification.
Pyridinium Salt #1		No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)
Naphthalene	91-20-3	No significant toxicity observed in animal studies at concentration requiring classification.

Substances	CAS Number	Aspiration hazard
Xylene	1330-20-7	Aspiration into the lungs may cause chemical pneumonitis including coughing, difficulty breathing, wheezing, coughing up blood and pneumonia, which can be fatal.
Naphtha (petroleum), hydrotreated light	64742-49-0	May be fatal if swallowed and enters airways
Ethyl benzene	100-41-4	Aspiration into the lungs may cause chemical pneumonitis including coughing, difficulty breathing, wheezing, coughing up blood and pneumonia, which can be fatal.
Hexane	110-54-3	Aspiration into the lungs may cause chemical pneumonitis including coughing, difficulty breathing, wheezing, coughing up blood and pneumonia, which can be fatal.
Alkylphenol		Not applicable
Amine Polymer		Not applicable
Methylcyclopentane	96-37-7	Aspiration into the lungs may cause chemical pneumonitis including coughing, difficulty breathing, wheezing, coughing up blood and pneumonia, which can be fatal.
Heavy aromatic petroleum naphtha	64742-94-5	Aspiration into the lungs may cause chemical pneumonitis including coughing, difficulty breathing, wheezing, coughing up blood and pneumonia, which can be fatal.
Light aromatic solvent	64742-95-6	May be fatal if swallowed and enters airways
Phenol		Not applicable
Pyridinium Salt #1		Not applicable
Naphthalene	91-20-3	No information available

12. Ecological Information

12.1. Toxicity

Ecotoxicity effects

Very 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
Xylene	1330-20-7	EC50 (72h) = 4.9 mg/L(Pseudokirchnerella subcapitata)	NOEC (56d) > 1.3 mg/L (Oncorhynchus mykiss) LC50 (96h) 2.6 mg/L (Oncorhynchus mykiss)	No information available	LC50 (24h) = 1mg/L(Daphnia magna)
Naphtha (petroleum), hydrotreated light	64742-49-0	EC50 (72h) 55 mg/L (Pseudokirchneriella subspicatus) NOER (72h) 30 mg/L (Pseudokirchneriella subspicatus)	LC50 (48h) > 1 mg/L (Oryzias latipes)	No information available	LC50(48h) 3.9 mg/L (Daphnia magna)
Ethyl benzene	100-41-4	EC50 (96 h) 3.6 mg/L (Pseudokirchneriella subcapitata) EC50 (8 d) 4.8 mg/L (Pseudokirchneriella subcapitata)	LC50 (96 h) 4.2 mg/L (Oncorhynchus mykiss)	EC50 (24h) 96 mg/L (Nitrosomonas sp.)	EC50 (48 h) 1.8 mg/L (Daphnia magna) NOEC (7 d) 0.96 mg/L (Ceriodaphnia dubia)
Hexane	110-54-3	EC50 (10d) 2.66% v/v (Chlorella pyrenoidosa)	LC50 (96h) 2.5 mg/L (Pimephales promelas) LC50 (48h) >1 mg/L (Oryzias latipes)	No information available	EC50 (48h) 45 mmol/m^3 (Daphnia magna)
Alkylphenol	Proprietary	EC50 (96 h) =0.027 mg/L (Skeletonema costatum)	LC50 (96 h) =0.135 mg/L (fathead minnow) LC50 (96 h) =0.08 mg/L (Hybopsis monacha) NOEC (28 d) =0.0595 mg/L (Lepomis macrochirus)	EC50 (3h) 950 mg/L (Activated sludge, domestic)	EC50 (48 h) =0.14 mg/L (Daphnia magna) NOEL (21 d) =0.024 mg/L (Daphnia magna)
Amine Polymer	Proprietary	No information available	No information available	No information available	No information available
Methylcyclopentane	96-37-7	EC50 (72h) 0.134 mg/L (Pseudokirchnerella subcapitata) (similar substance)	LC50 (96h) 2.07 mg/L (Oryzias latipes) (similar substance)	No information available	EC50 (48h) 0.326 mg/L (Daphnia magna) (similar substance)
Heavy aromatic petroleum naphtha	64742-94-5	EC50 (72h) 7.8 mg/L (Pseudokirchneriella subcapitata)	LL50 (96 h) =3.6 mg/L (Orcorhynchus mykiss) LC50 (96 h) =357.7 mg/L (Scophthalmus maximus)	No information available	EL50 (48h) 1.1 mg/L (Daphnia magna) (similar substance)

Light aromatic solvent	64742-95-6	EL50 (72h) 3.1 mg/L (Pseudokirchnerella subcapitata)	LC50 (96h) 1.03 mg/L (Oncorhynchus mykiss)	No information available	EC50 (48h) 1.2 mg/L (Daphnia magna)
Phenol	Proprietary	EC50 (72h) 1.3 mg/L (Desmodesmus subspicatus) (similar substance)	LC50 (96h) 0.08 mg/L (Hybopsis monacha) (similar substance) LC50 (96h) 0.098 - 0.187 mg/L (Pimephales promelas) (similar substances) NOEC (33d) 0.0074 mg/L (Pimephales promelas) (similar substance)	EC50 (3h) 950 mg/L (Activated sludge, domestic) (similar substance)	EC50 (48h) 0.14 mg/L (Daphnia magna) (similar substance) NOEC (21d) >0.1 mg/L (Daphnia magna) (similar substance) NOEC (28d) 0.0039 mg/L (Daphnia magna) (similar substance)
Pyridinium Salt #1	Proprietary	LC50 (72 h) =61.2 mg/L (Scenedesmus capricornutum)	LC50 (96 h) =2.96 mg/L (Oncorhynchus mykiss)	No information available	EC50 (48 h) =39.6 mg/L (Daphnia magna) NOEC (21 d) =22.2 mg/L (Daphnia magna)
Naphthalene	91-20-3	EC50 (72 h) =0.4 mg/L (Skeletonema costatum)	LC50 (96 h) =1.6 mg/L (Oncorhynchus mykiss) NOAEC (40 d) =0.37 mg/L (Oncorhynchus kisutch)	IC50 (24 h) =29 mg/L (Nitrosomonas sp.)	EC50 (48 h) =2.16 mg/L (Daphnia magna) NOAEC (125 d) =0.59 mg/L (Daphnia pulex)

12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Xylene	1330-20-7	Readily biodegradable (87.8% @ 28d)
Naphtha (petroleum), hydrotreated light	64742-49-0	Readily biodegradable (98% @ 28d)
Ethyl benzene	100-41-4	Readily biodegradable (79% @ 28d)
Hexane	110-54-3	No information available
Alkylphenol	Proprietary	Not readily biodegradable (7% @ 28d)
Amine Polymer	Proprietary	No information available
Methylcyclopentane	96-37-7	Not readily biodegradable
Heavy aromatic petroleum naphtha	64742-94-5	Readily biodegradable (58% @ 28d)
Light aromatic solvent	64742-95-6	(77.05% @ 28d)
Phenol	Proprietary	Not readily biodegradable (7% @ 28d)
Pyridinium Salt #1	Proprietary	Not readily biodegradable. (56.6% @ 28d)
Naphthalene	91-20-3	Readily biodegradable (100% @ 7d)

12.3. Bioaccumulative potential

Substances	CAS Number	Bioaccumulation
Xylene	1330-20-7	Log Pow 2.8 - 3.2
Naphtha (petroleum), hydrotreated light	64742-49-0	No information available
Ethyl benzene	100-41-4	LogPow 3.6
Hexane	110-54-3	4
Alkylphenol	Proprietary	5.4 BCF = 740
Amine Polymer	Proprietary	No information available
Methylcyclopentane	96-37-7	Log Kow = 3.37
Heavy aromatic petroleum naphtha	64742-94-5	LogPow 5.2
Light aromatic solvent	64742-95-6	3.20 - 3.63 BCF = 119 - 142
Phenol	Proprietary	4.5 - 5.4 BCF = 740
Pyridinium Salt #1	Proprietary	2.1 - 2.52 (similar substance)
Naphthalene	91-20-3	LogPow 3.3

12.4. Mobility in soil

Substances	CAS Number	Mobility
Xylene	1330-20-7	KOC = 537
Naphtha (petroleum), hydrotreated light	64742-49-0	No information available
Ethyl benzene	100-41-4	KOC = 520
Hexane	110-54-3	KOC = <2

Alkylphenol	Proprietary	KOC = 4.5-5.69 (calc)
Amine Polymer	Proprietary	No information available
Methylcyclopentane	96-37-7	Spillage unlikely to penetrate soil
Heavy aromatic petroleum naphtha	64742-94-5	No information available
Light aromatic solvent	64742-95-6	KOC = 372 - 617
Phenol	Proprietary	KOC = 4.35-5.69
Pyridinium Salt #1	Proprietary	No information available
Naphthalene	91-20-3	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 UN2924

UN proper shipping name: Flammable Liquid, Corrosive, N.O.S. (Contains Naphtha (petroleum, hydrotreated light, 4-Nonylphenol, branched)

Transport Hazard Class(es): 3 (8)

Packing Group: II

Environmental Hazards: Marine Pollutant

NAERG: NAERG 132

Canadian TDG

UN Number UN2924

UN proper shipping name: Flammable Liquid, Corrosive, N.O.S. (Contains Naphtha (petroleum, hydrotreated light, 4-Nonylphenol, branched)

Transport Hazard Class(es): 3 (8)

Packing Group: II

Environmental Hazards: Marine Pollutant

IMDG/IMO

UN Number UN2924

UN proper shipping name: Flammable Liquid, Corrosive, N.O.S. (Contains Naphtha (petroleum, hydrotreated light, 4-Nonylphenol, branched)

Transport Hazard Class(es): 3 (8)

Packing Group: II

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 Naphtha (petroleum, hydrotreated light, 4-Nonylphenol, branched)

Transport Hazard Class(es): 3 (8)

Packing Group: II

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
Xylene	1330-20-7	Not applicable
Naphtha (petroleum), hydrotreated light	64742-49-0	Not applicable
Ethyl benzene	100-41-4	Not applicable
Hexane	110-54-3	Not applicable
Alkylphenol	Proprietary	79 FR 59186, Oct 1, 2014 proposed rule 721.10765
Amine Polymer	Proprietary	Not applicable
Methylcyclopentane	96-37-7	Not applicable
Heavy aromatic petroleum naphtha	64742-94-5	Not applicable
Light aromatic solvent	64742-95-6	Not applicable
Phenol	Proprietary	79 FR 59186, Oct 1, 2014 proposed rule 721.10765
Pyridinium Salt #1	Proprietary	Not applicable
Naphthalene	91-20-3	Not applicable

EPA SARA Title III Extremely Hazardous Substances

Substances	CAS Number	EPA SARA Title III Extremely Hazardous Substances
Xylene	1330-20-7	Not applicable
Naphtha (petroleum), hydrotreated light	64742-49-0	Not applicable
Ethyl benzene	100-41-4	Not applicable
Hexane	110-54-3	Not applicable
Alkylphenol	Proprietary	Not applicable
Amine Polymer	Proprietary	Not applicable
Methylcyclopentane	96-37-7	Not applicable
Heavy aromatic petroleum naphtha	64742-94-5	Not applicable
Light aromatic solvent	64742-95-6	Not applicable
Phenol	Proprietary	Not applicable
Pyridinium Salt #1	Proprietary	Not applicable
Naphthalene	91-20-3	Not applicable

EPA SARA (311,312) Hazard Class

Flammable (gases, aerosols, liquids, or solids)
Aspiration Hazard
Skin Corrosion or Irritation
Respiratory or Skin Sensitization
Serious eye damage or eye irritation
Specific target organ toxicity (single or repeated exposure)
Germ cell mutagenicity
Carcinogenicity
Reproductive toxicity

EPA SARA (313) Chemicals

Substances	CAS Number	Toxic Release Inventory (TRI) - Group I	Toxic Release Inventory (TRI) - Group II
Xylene	1330-20-7	1.0%	Not applicable
Naphtha (petroleum), hydrotreated light	64742-49-0	Not applicable	Not applicable
Ethyl benzene	100-41-4	0.1%	Not applicable
Hexane	110-54-3	1.0%	>= 1.0 %
Alkylphenol	Proprietary	1.0%	Not applicable
Amine Polymer	Proprietary	Not applicable	Not applicable
Methylcyclopentane	96-37-7	Not applicable	Not applicable
Heavy aromatic petroleum naphtha	64742-94-5	Not applicable	Not applicable
Light aromatic solvent	64742-95-6	Not applicable	Not applicable
Phenol	Proprietary	Not applicable	Not applicable

Pyridinium Salt #1	Proprietary	Not applicable	Not applicable
Naphthalene	91-20-3	0.1%	Not applicable

EPA CERCLA/Superfund Reportable Spill Quantity

Substances	CAS Number	CERCLA RQ
Xylene	1330-20-7	100 lb 45.4 kg
Naphtha (petroleum), hydrotreated light	64742-49-0	Not applicable
Ethyl benzene	100-41-4	1000 lb 454 kg
Hexane	110-54-3	5000 lb 2270 kg
Alkylphenol	Proprietary	Not applicable
Amine Polymer	Proprietary	Not applicable
Methylcyclopentane	96-37-7	Not applicable
Heavy aromatic petroleum naphtha	64742-94-5	Not applicable
Light aromatic solvent	64742-95-6	Not applicable
Phenol	Proprietary	Not applicable
Pyridinium Salt #1	Proprietary	Not applicable
Naphthalene	91-20-3	100 lb 45.4 kg 1 lb 0.454 kg

EPA RCRA Hazardous Waste Classification

Ignitability D001
Corrosivity D002

California Proposition 65

Substances	CAS Number	California Proposition 65
Xylene	1330-20-7	Not applicable
Naphtha (petroleum), hydrotreated light	64742-49-0	Not applicable
Ethyl benzene	100-41-4	carcinogen
Hexane	110-54-3	Not applicable
Alkylphenol	Proprietary	Not applicable
Amine Polymer	Proprietary	Not applicable
Methylcyclopentane	96-37-7	Not applicable
Heavy aromatic petroleum naphtha	64742-94-5	Not applicable
Light aromatic solvent	64742-95-6	Not applicable
Phenol	Proprietary	Not applicable
Pyridinium Salt #1	Proprietary	Not applicable
Naphthalene	91-20-3	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
Xylene	1330-20-7	Present	Present	Environmental hazard
Naphtha (petroleum), hydrotreated light	64742-49-0	Not applicable	Not applicable	Not applicable
Ethyl benzene	100-41-4	Present	Present	Environmental hazard
Hexane	110-54-3	Present	Present	Present
Alkylphenol	Proprietary	Not applicable	Not applicable	Not applicable
Amine Polymer	Proprietary	Not applicable	Not applicable	Not applicable
Methylcyclopentane	96-37-7	Present	Present	Present
Heavy aromatic petroleum naphtha	64742-94-5	Not applicable	Not applicable	Not applicable
Light aromatic solvent	64742-95-6	Not applicable	Not applicable	Not applicable
Phenol	Proprietary	Not applicable	Not applicable	Not applicable
Pyridinium Salt #1	Proprietary	Not applicable	Not applicable	Not applicable
Naphthalene	91-20-3	Present	Present	Environmental hazard

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) Product contains one or more components not listed on the inventory.

16. Other information

Preparation Information

Prepared By
Chemical Stewardship
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Revision Date: 06-Nov-2018

Reason for Revision Initial Release

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