

SAFETY DATA SHEET

Product Trade Name: MC P-3810

Revision Date: 11-Mar-2016

Revision Number: 2

1. Identification

1.1. Product Identifier

Product Trade Name: MC P-3810
Synonyms: None
Chemical Family: Blend
Internal ID Code: MC003032

1.2 Recommended use and restrictions on use

Application: Paraffin/Asphaltene Solvent
Uses advised against: Consumer use

1.3 Manufacturer's Name and Contact Details

Manufacturer/Supplier

Multi-Chem Group LLC
 424 S Chadbourne St
 San Angelo, TX 76903
 Phone: 1 325 223 6200
 Emergency Phone Number: 1-866-519-4752 (US, Canada, Mexico) or 1-760-476-3962

Halliburton Energy Services
 645 - 7th Ave SW Suite 2200
 Calgary, AB
 T2P 4G8
 Canada

Prepared By: Chemical Stewardship
 Telephone: 1-281-871-6107
 e-mail: fdunexchem@halliburton.com

1.4. Emergency telephone number

Emergency Telephone Number: 1-866-519-4752 or 1-760-476-3962

2. Hazard(s) Identification

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

Aspiration Toxicity	Category 1 - H304
Skin Corrosion / Irritation	Category 2 - H315
Serious Eye Damage/Irritation	Category 2B - H320
Germ Cell Mutagenicity	Category 1B - H340
Carcinogenicity	Category 1B - H350
Reproductive Toxicity	Category 1B - H360
Specific Target Organ Toxicity - (Single Exposure)	Category 3 - H336

Specific Target Organ Toxicity - (Repeated Exposure)	Category 2 - H373
Acute Aquatic Toxicity	Category 2 - H401
Chronic Aquatic Toxicity	Category 3 - H412
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
 H315 - Causes skin irritation
 H320 - Causes mild eye irritation
 H336 - May cause drowsiness or dizziness
 H340 - May cause genetic defects
 H350 - May cause cancer
 H360 - May damage fertility or the unborn child
 H373 - May cause damage to organs through prolonged or repeated exposure
 H401 - Toxic to aquatic life
 H412 - Harmful to aquatic life with long lasting effects

Precautionary Statements

Prevention

P202 - Do not handle until all safety precautions have been read and understood
 P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
 P233 - Keep container tightly closed
 P240 - Ground/Bond container and receiving equipment
 P241 - Use explosion-proof electrical/ventilating/lighting/equipment
 P242 - Use only non-sparking tools
 P243 - Take precautionary measures against static discharge
 P260 - Do not breathe dust/fume/gas/mist/vapors/spray
 P264 - Wash face, hands and any exposed skin thoroughly after handling
 P273 - Avoid release to the environment
 P271 - Use only outdoors or in a well-ventilated area
 P280 - Wear protective gloves/eye protection/face protection

Response

P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
 P331 - Do NOT induce vomiting
 P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
 P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several

	minutes. Remove contact lenses, if present and easy to do. Continue rinsing
	P312 - Call a POISON CENTER/doctor/physician if you feel unwell
Storage	P370 + P378 - In case of fire: Use CO2, dry chemical, or foam
	P403 + P235 - Store in a well-ventilated place. Keep cool
	P404 - Store in a closed container
	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
Toluene	108-88-3	60 - 100%	Skin Irrit. 2 (H315) Eye Irrit. 2B (H320) Repr. 1B (H360) STOT SE 3 (H336) STOT RE 2 (H373) Asp. Tox. 1 (H304) Aquatic Acute 2 (H401) Aquatic Chronic 3 (H412) Flam. Liq. 2 (H225)
Light aliphatic solvent naphtha	64742-89-8	30 - 60%	Skin Irrit. 2 (H315) Muta. 1B (H340) Carc. 1B (H350) Repr. 2 (H361) STOT SE 3 (H336) Asp. Tox. 1 (H304) Aquatic Acute 2 (H401) Aquatic Chronic 4 (H413) Flam. Liq. 3 (H226)

The specific chemical identity of the composition has been withheld as proprietary.

4. First-Aid Measures**4.1. Description of first aid measures**

Inhalation	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Seek immediate medical attention/advice.
Eyes	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.
Skin	In case of contact, immediately flush skin with plenty of soap and water for at least 15 minutes. Get medical attention.
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 skin irritation. May cause mild eye irritation. May cause heritable genetic damage. Carcinogen. Potential reproductive hazard. May cause birth defects. May cause headache, dizziness, and other central nervous system effects. Prolonged or repeated exposure may cause damage to organs.

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
Toluene	108-88-3	TWA: 200 ppm Ceiling: 300 ppm	TWA: 20 ppm

Light aliphatic solvent naphtha	64742-89-8	Not applicable	Not applicable
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8.2 Appropriate engineering controls

Engineering Controls Ensure adequate ventilation, especially in confined areas

8.3 Individual protection measures, such as personal protective equipment

Personal Protective Equipment If engineering controls and work practices cannot prevent excessive exposures, the selection and proper use of personal protective equipment should be determined by an industrial hygienist or other qualified professional based on the specific application of this product.

Respiratory Protection If engineering controls and work practices cannot keep exposure below occupational exposure limits or if exposure is unknown, wear a NIOSH certified, European Standard EN 149, AS/NZS 1715:2009, or equivalent respirator when using this product. Selection of and instruction on using all personal protective equipment, including respirators, should be performed by an Industrial Hygienist or other qualified professional.

Hand Protection Use gloves which are suitable for the chemicals present in this product as well as other environmental factors in the workplace.

Skin Protection Wear impervious protective clothing, including boots, gloves, lab coat, apron, rain jacket, pants or coverall, as appropriate, to prevent skin contact.

Eye Protection Safety glasses with side-shields. If splashes are likely to occur, wear: Goggles, Face-shield.

Other Precautions Eyewash fountains and safety showers must be easily accessible.

9. Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Physical State: Liquid	Color	Clear to Slightly Hazy , Colorless to Light Amber
Odor: Aromatic hydrocarbon	Odor Threshold:	No information available

<u>Property</u>	<u>Values</u>
Remarks/ - Method	
pH:	4.6-5.6 (10% in 1:1 IPA:H2O)
Freezing Point / Range	-40 °C / -40 °F
Melting Point / Range	No data available
Boiling Point / Range	No data available
Flash Point	5.6 °C / 42.1 °F (SFCC)
Flammability (solid, gas)	No data available
Upper flammability limit	No data available
Lower flammability limit	No data available
Evaporation rate	
Vapor Pressure	No data available
No data available	
Vapor Density	No data available
Specific Gravity	0.806-0.831
Water Solubility	No data available
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

6.72 - 6.93 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

Fumes of aromatic hydrocarbons. Carbon oxides.

11. Toxicological Information**11.1 Information on likely routes of exposure**

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

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.

Eye Contact

Causes eye irritation.

Skin Contact

Causes skin irritation.

Ingestion

May be fatal if swallowed and enters airways.

Chronic Effects/Carcinogenicity May cause heritable genetic damage. Contains known or suspected carcinogens. Prolonged or repeated exposure may cause reproductive system damage. 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
Toluene	108-88-3	5580 mg/kg (Rat)	12,000 mg/kg (Rat)	28.1 mg/L (Rat) 4h
Light aliphatic solvent naphtha	64742-89-8	> 5000 mg/kg bw (Rat)	> 2000 mg/kg (Rabbit)	> 5.6 mg/L (Rat) 4h

Substances	CAS Number	Skin corrosion/irritation
Toluene	108-88-3	Skin, rabbit: Causes moderate skin irritation.
Light aliphatic solvent naphtha	64742-89-8	Skin, rabbit: Causes moderate skin irritation.

Substances	CAS Number	Serious eye damage/irritation
Toluene	108-88-3	Causes moderate eye irritation
Light aliphatic solvent	64742-89-8	Non-irritating to rabbit's eye

naphtha		
Substances	CAS Number	Skin Sensitization
Toluene	108-88-3	Did not cause sensitization on laboratory animals (guinea pig)
Light aliphatic solvent naphtha	64742-89-8	Did not cause sensitization on laboratory animals (guinea pig)
Substances	CAS Number	Respiratory Sensitization
Toluene	108-88-3	No information available
Light aliphatic solvent naphtha	64742-89-8	No information available
Substances	CAS Number	Mutagenic Effects
Toluene	108-88-3	The weight of evidence from available in vitro and in vivo studies indicates that this substance is not expected to be mutagenic.
Light aliphatic solvent naphtha	64742-89-8	Some in vivo tests have shown mutagenic effects. Some in vitro tests have shown mutagenic effects.
Substances	CAS Number	Carcinogenic Effects
Toluene	108-88-3	No data of sufficient quality are available.
Light aliphatic solvent naphtha	64742-89-8	This substance is a potential carcinogen.
Substances	CAS Number	Reproductive toxicity
Toluene	108-88-3	Fetotoxic and teratogenic effects observed in experimental animals at concentrations that did not produce maternal toxicity.
Light aliphatic solvent naphtha	64742-89-8	May cause adverse reproductive effects - such as birth defect, miscarriages, or infertility
Substances	CAS Number	STOT - single exposure
Toluene	108-88-3	May cause headache, dizziness, and other central nervous system effects.
Light aliphatic solvent naphtha	64742-89-8	May cause disorder and damage to the Central Nervous System (CNS)
Substances	CAS Number	STOT - repeated exposure
Toluene	108-88-3	Causes damage to organs through prolonged or repeated exposure if inhaled: Central Nervous System (CNS)
Light aliphatic solvent naphtha	64742-89-8	No significant toxicity observed in animal studies at concentration requiring classification.
Substances	CAS Number	Aspiration hazard
Toluene	108-88-3	Aspiration into the lungs may cause chemical pneumonitis including coughing, difficulty breathing, wheezing, coughing up blood and pneumonia, which can be fatal.
Light aliphatic solvent naphtha	64742-89-8	Aspiration into the lungs may cause chemical pneumonitis including coughing, difficulty breathing, wheezing, coughing up blood and pneumonia, which can be fatal.

12. Ecological Information

12.1. Toxicity

Ecotoxicity effects

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

Product Ecotoxicity Data

No data available

Substance Ecotoxicity Data

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Toluene	108-88-3	EC50 (3h) 134 mg/L (Chlamydomonas angulosa) EC50 (72h) 12.5 mg/L (Selenastrum capricornutum)	LC50 (96h) 5.8 mg/L (Oncorhynchus mykiss) LC50 (96h) 5.5 mg/L (Oncorhynchus kisutch) NOEC (40d) 1.4 mg/L (Oncorhynchus kisutch)	IC50 (24h) 84 mg/L (Nitrosomonas sp.)	LC50 (48h) 3.78 mg/L (Ceriodaphnia dubia) EC50 (48h) 11.5 mg/L (Daphnia magna) NOEC (7d) 0.74 mg/L (Ceriodaphnia dubia) NOEC (21d) 1 mg/L

Light aliphatic solvent naphtha	64742-89-8	No information available	LL50 (96h) 8.2mg/L (Pimephales promelas)	No information available	(Daphnia magna) NOELR (21d) 2.6 mg/L (Daphnia magna)
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12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Toluene	108-88-3	Readily biodegradable
Light aliphatic solvent naphtha	64742-89-8	Readily biodegradable (77.05% @ 28d)

12.3. Bioaccumulative potential

Substances	CAS Number	Log Pow
Toluene	108-88-3	2.73
Light aliphatic solvent naphtha	64742-89-8	Log Kow > 3

12.4. Mobility in soil

Substances	CAS Number	Mobility
Toluene	108-88-3	No information available
Light aliphatic solvent naphtha	64742-89-8	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 Toluene, Light aromatic naphtha)
Transport Hazard Class(es): 3
Packing Group: II
Environmental Hazards Not applicable
NAERG: NAERG 128

Canadian TDG

UN Number UN1993
UN proper shipping name: Flammable Liquid, N.O.S. (Contains Toluene, Light aromatic naphtha)
Transport Hazard Class(es): 3
Packing Group: II
Environmental Hazards Not applicable

IMDG/IMO

UN Number UN1993
UN proper shipping name: Flammable Liquid, N.O.S. (Contains Toluene, Light aromatic naphtha)
Transport Hazard Class(es): 3
Packing Group: II
Environmental Hazards Not applicable
EMS: EmS F-E, S-E

IATA/ICAO

UN Number UN1993
UN proper shipping name: Flammable Liquid, N.O.S. (Contains Toluene, Light aromatic naphtha)
Transport Hazard Class(es): 3
Packing Group: II
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
Toluene	108-88-3	Not applicable
Light aliphatic solvent naphtha	64742-89-8	Not applicable

EPA SARA Title III Extremely Hazardous Substances

Substances	CAS Number	EPA SARA Title III Extremely Hazardous Substances
Toluene	108-88-3	Not applicable
Light aliphatic solvent naphtha	64742-89-8	Not applicable

EPA SARA (311,312) Hazard Class

Acute Health Hazard
 Chronic Health Hazard
 Fire Hazard

EPA SARA (313) Chemicals

Substances	CAS Number	Toxic Release Inventory (TRI) - Group I	Toxic Release Inventory (TRI) - Group II
Toluene	108-88-3	1.0%	>= 1.0 %
Light aliphatic solvent naphtha	64742-89-8	Not applicable	Not applicable

EPA CERCLA/Superfund Reportable Spill Quantity

Substances	CAS Number	CERCLA RQ
Toluene	108-88-3	1000 lb 454 kg 1 lb 0.454 kg
Light aliphatic solvent naphtha	64742-89-8	Not applicable

EPA RCRA Hazardous Waste Classification

Ignitability D001

California Proposition 65 The California Proposition 65 regulations apply to this product.

MA Right-to-Know Law One or more components listed.

NJ Right-to-Know Law One or more components listed.

PA Right-to-Know Law One or more components listed.

NFPA Ratings: Health 2, Flammability 3, Reactivity 0

HMIS Ratings: Health 2*, Flammability 3, Physical Hazard 0, PPE: X

Canadian Regulations

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

16. Other information

Preparation Information

Prepared By Chemical Stewardship
Telephone: 1-281-871-6107
e-mail: fdunexchem@halliburton.com

Revision Date: 11-Mar-2016

Reason for Revision Update to Format

Additional information

For additional information on the use of this product, contact your local Halliburton representative.

For questions about the Safety Data Sheet for this or other Halliburton products, contact Chemical Stewardship at 1-580-251-4335.

Key or legend to abbreviations and acronyms used in the safety data sheet

bw – body weight
CAS – Chemical Abstracts Service
EC50 – Effective Concentration 50%
ErC50 – Effective Concentration growth rate 50%
LC50 – Lethal Concentration 50%
LD50 – Lethal Dose 50%
LL50 – Lethal Loading 50%
mg/kg – milligram/kilogram
mg/L – milligram/liter
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
h - hour
mg/m³ - milligram/cubic meter
mm - millimeter
mmHg - millimeter mercury
w/w - weight/weight
d - day

Key literature references and sources for data

www.ChemADVISOR.com/

Disclaimer Statement

This information is furnished without warranty, expressed or implied, as to accuracy or completeness. The information is obtained from various sources including the manufacturer and other third party sources. The information may not be valid under all conditions nor if this material is used in combination with other materials or in any process. Final determination of suitability of any material is the sole responsibility of the user.

End of Safety Data Sheet