

SAFETY DATA SHEET

Product Trade Name: MC C-6013

Revision Date: 01-Apr-2016

Revision Number: 4

1. Identification

1.1. Product Identifier

Product Trade Name: MC C-6013
Synonyms: None
Chemical Family: Blend
Internal ID Code: MC000660

1.2 Recommended use and restrictions on use

Application: Corrosion Inhibitor
Uses advised against: Consumer use

1.3 Manufacturer's Name and Contact Details

Manufacturer/Supplier

Multi-Chem Group LLC
 424 S Chadbourne St
 San Angelo, TX 76903
 Phone: 1 325 223 6200

Emergency Phone Number: 1-866-519-4752 (US, Canada, Mexico) or 1-760-476-3962

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

Prepared By

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

1.4. Emergency telephone number

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

2. Hazard(s) Identification

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

Acute Oral Toxicity	Category 4 - H302
Skin Corrosion / Irritation	Category 1 B - H314
Serious Eye Damage/Irritation	Category 1 - H318
Reproductive Toxicity	Category 1B - H360
Specific Target Organ Toxicity - (Single Exposure)	Category 1 - H370
Acute Aquatic Toxicity	Category 1 - H400

Chronic Aquatic Toxicity	Category 2 - H411
Flammable liquids.	Category 3 - H226

2.2. Label Elements

Hazard pictograms



Signal Word

Danger

Hazard Statements

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

Precautionary Statements

Prevention

P201 - Obtain special instructions before use
 P202 - Do not handle until all safety precautions have been read and understood
 P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
 P233 - Keep container tightly closed
 P240 - Ground/Bond container and receiving equipment
 P241 - Use explosion-proof electrical/ventilating/lighting/equipment
 P242 - Use only non-sparking tools
 P243 - Take precautionary measures against static discharge
 P260 - Do not breathe dust/fume/gas/mist/vapors/spray
 P264 - Wash face, hands and any exposed skin thoroughly after handling
 P273 - Avoid release to the environment
 P270 - Do not eat, drink or smoke when using this product

Response

P280 - Wear protective gloves/protective clothing/eye protection/face protection
 P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting
 P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
 P363 - Wash contaminated clothing before reuse
 P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 P310 - Immediately call a POISON CENTER or doctor/physician
 P370 + P378 - In case of fire: Use CO2, dry chemical, or foam
 P391 - Collect spillage

Storage

P403 + P235 - Store in a well-ventilated place. Keep cool

Disposal

P405 - Store locked up
 P501 - Dispose of contents/container in accordance with local/regional/national/international regulations

2.3 Hazards not otherwise classified

None known

3. Composition/information on Ingredients

Substances	CAS Number	PERCENT (w/w)	GHS Classification - US
Methanol	67-56-1	30 - 60%	Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 3 (H331) Repr. 1B (H360) STOT SE 1 (H370) Flam. Liq. 2 (H225)
Modified Tall Oil	Proprietary	5 - 10%	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) STOT SE 3 (H335) Aquatic Acute 1 (H400)
Isopropanol	67-63-0	5 - 10%	Eye Irrit. 2 (H319) STOT SE 3 (H336) Flam. Liq. 2 (H225)
Quaternary Ammonium Chloride	Proprietary	5 - 10%	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)

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

Following ingestion, onset of symptoms may be delayed by 12 to 24 hours. Admission to hospital should be the first priority even if symptoms are absent. Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Obtain immediate medical attention.

4.2 Most important symptoms/effects, acute and delayed

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

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

Remove and wash contaminated clothing before re-use Wash hands before breaks and immediately after handling the product

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
Methanol	67-56-1	TWA: 200 ppm	TWA: 200 ppm STEL: 250 ppm
Modified Tall Oil	Proprietary	Not applicable	Not applicable
Isopropanol	67-63-0	TWA: 400 ppm	TWA: 200 ppm STEL: 400 ppm
Quaternary Ammonium Chloride	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 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** Light Amber to Dark Amber , Clear to Slightly Hazy
Odor: Strong **Odor Threshold:** No information available

<u>Property</u>	<u>Values</u>
Remarks/ - Method	
pH:	5.2-6.2 (10% in 1:1 IPA:H2O)
Freezing Point / Range	-28.9 °C / -20 °F
Melting Point / Range	No data available
Boiling Point / Range	No data available
Flash Point	31.1 °C / 88 °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	0.9053-0.9303
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	7.54-7.75 lbs/gal

10. Stability and Reactivity**10.1. Reactivity**

Not expected to be reactive.

10.2. Chemical stability

Stable

10.3. Possibility of hazardous reactions

Will Not Occur

10.4. Conditions to avoid

Keep away from heat, sparks and flame.

10.5. Incompatible materials

Strong oxidizers. Strong acids. Strong alkalis.

10.6. Hazardous decomposition products

Carbon oxides. Oxides of nitrogen.

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

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

11.2 Symptoms related to the physical, chemical and toxicological characteristics**Acute Toxicity****Inhalation**

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

Eye Contact

Causes serious eye damage.

Skin Contact

Causes severe burns.

Ingestion

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

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

11.3 Toxicity data**Toxicology data for the components**

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
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
Isopropanol	67-63-0	4396 mg/kg (Rat) 5840 mg/kg (Rat) 3600 mg/kg (Mouse)	12,800 mg/kg (Rat) 12,870 mg/kg (Rabbit) 6280 mg/kg (Rabbit)	72.6 mg/L (Rat) 4h > 10,000 mg/L (Rat) 6h
Quaternary Ammonium	Proprietary	304.5 mg/kg (Rat)	930 mg/kg (rat)	No data available

Chloride			
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Substances	CAS Number	Skin corrosion/irritation
Methanol	67-56-1	Non-irritating to the skin (Rabbit)
Modified Tall Oil	Proprietary	May cause moderate skin irritation.
Isopropanol	67-63-0	Non-irritating to the skin (Rabbit)
Quaternary Ammonium Chloride	Proprietary	Causes burns (Rabbit)

Substances	CAS Number	Serious eye damage/irritation
Methanol	67-56-1	Non-irritating to the eye (Rabbit)
Modified Tall Oil	Proprietary	May cause moderate eye irritation.
Isopropanol	67-63-0	Causes moderate eye irritation (Rabbit)
Quaternary Ammonium Chloride	Proprietary	Causes eye burns (Rabbit)

Substances	CAS Number	Skin Sensitization
Methanol	67-56-1	Did not cause sensitization on laboratory animals (guinea pig)
Modified Tall Oil	Proprietary	No information available
Isopropanol	67-63-0	Did not cause sensitization on laboratory animals (guinea pig)
Quaternary Ammonium Chloride	Proprietary	Did not cause sensitization on laboratory animals (guinea pig)

Substances	CAS Number	Respiratory Sensitization
Methanol	67-56-1	No information available
Modified Tall Oil	Proprietary	No information available
Isopropanol	67-63-0	No information available
Quaternary Ammonium Chloride	Proprietary	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	Proprietary	No information available
Isopropanol	67-63-0	In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects.
Quaternary Ammonium Chloride	Proprietary	Did not show mutagenic effects in animal experiments

Substances	CAS Number	Carcinogenic Effects
Methanol	67-56-1	No data of sufficient quality are available.
Modified Tall Oil	Proprietary	No information available
Isopropanol	67-63-0	Did not show carcinogenic effects in animal experiments
Quaternary Ammonium Chloride	Proprietary	Did not show carcinogenic effects in animal experiments

Substances	CAS Number	Reproductive toxicity
Methanol	67-56-1	Experiments have shown reproductive toxicity effects on laboratory animals
Modified Tall Oil	Proprietary	No information available
Isopropanol	67-63-0	No significant toxicity observed in animal studies at concentration requiring classification.
Quaternary Ammonium Chloride	Proprietary	Not a confirmed teratogen or embryotoxin.

Substances	CAS Number	STOT - single exposure
Methanol	67-56-1	May cause disorder and damage to the Central Nervous System (CNS)
Modified Tall Oil	Proprietary	May cause respiratory irritation.
Isopropanol	67-63-0	May cause headache, dizziness, and other central nervous system effects.
Quaternary Ammonium Chloride	Proprietary	Causes moderate respiratory irritation.

Substances	CAS Number	STOT - repeated exposure
Methanol	67-56-1	No data of sufficient quality are available.
Modified Tall Oil	Proprietary	No information available
Isopropanol	67-63-0	No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)
Quaternary Ammonium Chloride	Proprietary	None under normal use conditions

Substances	CAS Number	Aspiration hazard
Methanol	67-56-1	Not applicable
Modified Tall Oil	Proprietary	Not applicable
Isopropanol	67-63-0	Not applicable
Quaternary Ammonium Chloride	Proprietary	No information available

12. Ecological Information

12.1. Toxicity

Ecotoxicity effects

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

Product Ecotoxicity Data

No data available

Substance Ecotoxicity Data

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Methanol	67-56-1	EC50 (96 h) =22000 mg/L (Pseudokirchnerella subcapitata) NOEC (8 d) =8000 mg/L (Scenedesmus quadricauda)	LC50 (96 h) =15400 mg/L (Lepomis macrochirus) EC50 (200 h) =14536 mg/L (Oryzias latipes)	IC50 (3h) > 1000 mg/L (activated sludge)	EC50 (96 h) =18260 mg/L (Daphnia magna) NOEC (21 d) =208 mg/L (Daphnia magna)
Modified Tall Oil	Proprietary	No information available	No information available	No information available	No information available
Isopropanol	67-63-0	EC50 (72h) > 1000 mg/L (Desmodesmus subspicatus) EC50 (7d) 1800 mg/L (Scenedesmus quadricauda)	LC50 (96h) 9640 mg/L (Pimephales promelas) LC50 (7d) 7060 mg/L (Poecilia reticulata)	TT (16h) 1050 mg/L (Pseudomonas putida)	EC50 (48h) 13,299 mg/L (Daphnia magna) EC50 (24h) > 10,000 mg/L (Daphnia magna)
Quaternary Ammonium Chloride	Proprietary	EC50 (72h) < 0.1 mg/L (Skeletonema costatum)	LC50 (96h) 0.44 mg/L (Scophthalmus maximus)	No information available	LC50 (48h) 0.72 mg/L (Acartia tonsa)

12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Methanol	67-56-1	(95-97% @ 20d)
Modified Tall Oil	Proprietary	Readily biodegradable
Isopropanol	67-63-0	Readily biodegradable (53% @ 5d)
Quaternary Ammonium Chloride	Proprietary	Biodegradable.

12.3. Bioaccumulative potential

Substances	CAS Number	Log Pow
Methanol	67-56-1	-0.77 BCF = 1.0 – 4.5 (Cyprinus carpio) BCF < 10 (Leuciscus idus melanotus)
Modified Tall Oil	Proprietary	No information available
Isopropanol	67-63-0	0.05
Quaternary Ammonium Chloride	Proprietary	No information available

12.4. Mobility in soil

Substances	CAS Number	Mobility
Methanol	67-56-1	No information available
Modified Tall Oil	Proprietary	No information available
Isopropanol	67-63-0	KOC = 1.5
Quaternary Ammonium Chloride	Proprietary	No information available

12.5 Other adverse effects

No information available

13. Disposal Considerations

13.1. Waste treatment methods

Disposal methods

Contaminated Packaging

Disposal should be made in accordance with federal, state, and local regulations. Contaminated packaging may be disposed of by: rendering packaging incapable of containing any substance, or treating packaging to remove residual contents, or treating packaging to make sure the residual contents are no longer hazardous, or by disposing of packaging into commercial waste collection.

14. Transport Information

US DOT

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

Canadian TDG

UN Number Not restricted
UN proper shipping name: Not approved for transport in Canada
Transport Hazard Class(es): Not applicable
Packing Group: Not applicable
Environmental Hazards Marine Pollutant

Not approved for transport in Canada

IMDG/IMO

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

IATA/ICAO

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

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable

Special Precautions for User None

15. Regulatory Information

US Regulations

US TSCA Inventory All components listed on inventory or are exempt.

TSCA Significant New Use Rules - S5A2

Substances	CAS Number	TSCA Significant New Use Rules - S5A2
Methanol	67-56-1	Not applicable
Modified Tall Oil	Proprietary	Not applicable
Isopropanol	67-63-0	Not applicable
Quaternary Ammonium Chloride	Proprietary	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
Isopropanol	67-63-0	Not applicable
Quaternary Ammonium Chloride	Proprietary	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
Methanol	67-56-1	1.0%	Not applicable
Modified Tall Oil	Proprietary	Not applicable	Not applicable
Isopropanol	67-63-0	1.0%	Not applicable
Quaternary Ammonium Chloride	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
Isopropanol	67-63-0	Not applicable
Quaternary Ammonium Chloride	Proprietary	Not applicable

EPA RCRA Hazardous Waste Classification

Ignitability D001
Corrosivity D002

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

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

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

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

NFPA Ratings: Health 3, Flammability 3, Reactivity 0

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

Canadian Regulations

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

16. Other information

Preparation Information

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

Revision Date: 01-Apr-2016

Reason for Revision Update to Format

Additional information

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

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

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

bw – body weight
CAS – Chemical Abstracts Service
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/
ECHA C&L
OSHA

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End of Safety Data Sheet