

A HALLIBURTON SERVICE

SAFETY DATA SHEET

MC SS-5079

Revision Date: 05-Mar-2015

Product Trade Name:

Revision Number: 3

1. Identification

| 1.1. Product Identifier | |
|-------------------------|------------|
| Product Trade Name: | MC SS-5079 |
| Synonyms | None |
| Chemical Family: | Blend |
| Internal ID Code | MC003084 |

1.2 Recommended use and restrictions on useApplication:SolventUses advised againstConsumer 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

As adopted by the competent authority, this product does not require an SDS or hazard warning label.

Not classified

2.2. Label Elements

Hazard pictograms

Signal Word

Not Classified

| Hazard Statements | Not Hazardous |
|--------------------------|---------------|
| Precautionary Statements | |
| Prevention | None |
| Response | None |
| Storage | None |
| Disposal | None |
| | |

2.3 Hazards not otherwise classified

None known

3. Composition/information on Ingredients

| Substances | CAS Number | PERCENT (w/w) | GHS Classification - US |
|--------------------------------------|------------|---------------|-------------------------|
| Contains no hazardous substances in | NA | 60 - 100% | Not classified |
| concentrations above cut-off values | | | |
| according to the competent authority | | | |

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, move victim to fresh air and seek medical attention. |
|------------|--|
| 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 | Flush skin with large amounts of water. If irritation persists, get medical attention. |
| Ingestion | Rinse mouth with water many times. Get medical attention if symptoms occur |

4.2 Most important symptoms/effects, acute and delayed

No significant hazards expected.

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

Notes to Physician Treat symptomatically.

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

Use appropriate protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. See Section 8 for additional information

6.2. Environmental precautions

Prevent from entering sewers, waterways, or low areas.

6.3. Methods and material for containment and cleaning up

Dike far ahead of liquid spill for later disposal. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

7. Handling and storage

7.1. Precautions for safe handling

Handling Precautions

Ensure adequate ventilation. Use appropriate protective equipment. 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 well ventilated area.

8. Exposure Controls/Personal Protection

8.1 Occupational Exposure Limits

| Substances | CAS Number | OSHA PEL-TWA | ACGIH TLV-TWA |
|---|------------|----------------|----------------|
| Contains no hazardous substances in concentrations above cut-off values according to the competent authority | NA | 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 | Not normally necessary. |
| 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 | None known. |

9. Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

| 9.1. Information on basic physical and chemical prop Physical State: Liquid | Color | Clear colorless | |
|--|-------------------|--------------------------|--|
| Odor: Mild | Odor | No information available | |
| | Threshold: | | |
| | Theshold. | | |
| Property | Values | | |
| Remarks/ - Method | | | |
| pH: | 7.7-8.7 | | |
| Freezing Point / Range | -4.3 °C / 24 ° | 'F | |
| Melting Point / Range | -7 °C / 19.4 ° | 'F | |
| Boiling Point / Range | 288 °C / 550 | °F | |
| Flash Point | 172.2 °C / 34 | 2 °F | |
| Flammability (solid, gas) | No data available | | |
| Upper flammability limit | No data available | | |
| Lower flammability limit | No data available | | |
| Evaporation rate | 0.27 | | |
| Vapor Pressure | <0.01 mmHg | | |
| Vapor Density | 5.2 | | |
| Specific Gravity | 1.1029-1.1279 | | |
| Water Solubility | Miscible with wa | | |
| Solubility in other solvents | No data availabl | • | |
| Partition coefficient: n-octanol/water | No data availabl | • | |
| Autoignition Temperature | 371 °C / 700 | °F | |
| Decomposition Temperature | No data availab | - | |
| Viscosity | 47.8 cps @ 20 º | | |
| Explosive Properties | No information a | | |
| Oxidizing Properties | No information a | available | |
| 9.2. Other information | | | |
| VOC Content (%) | No data availabl | | |
| Liquid Density | 9.17 lbs/gal | | |
| | 5.17 103/yai | | |

10. Stability and Reactivity

10.1. Reactivity

Not expected to be reactive.

10.2. Chemical stability

Stable under recommended storage conditions

10.3. Possibility of hazardous reactions

None under normal processing

10.4. Conditions to avoid

Excessive heat

10.5. Incompatible materials

Strong oxidizers. Strong acids. Strong alkalis.

10.6. Hazardous decomposition products

Carbon oxides.

11. Toxicological Information

11.1 Information on likely routes of exposure

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

11.2 Symptoms related to the physical, chemical and toxicological characteristics

| Acute Toxicity | |
|----------------|---|
| Inhalation | May cause mild respiratory irritation. |
| Eye Contact | May cause mild eye irritation. |
| Skin Contact | May cause mild skin irritation. |
| Ingestion | May cause abdominal pain, vomiting, nausea, and diarrhea. |
| | |

Chronic Effects/Carcinogenicity No data available to indicate product or components present at greater than 0.1% are chronic health hazards.

11.3 Toxicity data

Toxicology data for the components

| Substances | CAS Number | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|--------------------------|------------|-------------------|-------------------|-------------------|
| Contains no hazardous | NA | No data available | No data available | No data available |
| substances in | | | | |
| concentrations above | | | | |
| cut-off values according | | | | |
| to the competent | | | | |
| authority | | | | |

12. Ecological Information

12.1. Toxicity

Ecotoxicity effects

Product is not classified as hazardous to the environment.

Product Ecotoxicity Data

The environmental impact of this product has not been fully investigated

Substance Ecotoxicity Data

| Substances | CAS Number | Toxicity to Algae | Toxicity to Fish | Toxicity to Microorganisms | Toxicity to Invertebrates |
|---|------------|--------------------------|--------------------------|-------------------------------|---------------------------|
| Contains no hazardous substances in concentrations above cut-off values according to the competent authority | NA | No information available | No information available | V | No information available |

12.2. Persistence and degradability

| Substances | CAS Number | Persistence and Degradability |
|--|------------|-------------------------------|
| Contains no hazardous substances in | NA | No information available |
| concentrations above cut-off values according to | | |
| the competent authority | | |

12.3. Bioaccumulative potential

| Substances | CAS Number | Log Pow |
|------------|------------|---------|
| Substances | | 2091.01 |

| Contains no hazardous substances in | NA | No information available |
|--|----|--------------------------|
| concentrations above cut-off values according to | | |
| the competent authority | | |

12.4. Mobility in soil

| Substances | CAS Number | Mobility |
|---|------------|--------------------------|
| Contains no hazardous substances in concentrations | NA | No information available |
| above cut-off values according to the competent authority | | |

12.5 Other adverse effects

No information available

13. Disposal Considerations 13.1. Waste treatment methods Disposal 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 UN proper shipping name Transport Hazard Class(es) Packing Group: Environmental Hazards | Not restricted Not restricted Not applicable Not applicable Not applicable |
|---|--|
| Canadian TDG UN Number UN proper shipping name Transport Hazard Class(es) Packing Group: Environmental Hazards | Not restricted Not restricted Not applicable Not applicable Not applicable |
| IMDG/IMO UN Number UN proper shipping name Transport Hazard Class(es) Packing Group: Environmental Hazards | Not restricted Not restricted Not applicable Not applicable Not applicable |
| IATA/ICAO UN Number UN proper shipping name Transport Hazard Class(es) Packing Group: Environmental Hazards | Not restricted Not restricted Not applicable Not applicable 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 |
|--|------------|---------------------------------------|
| Contains no hazardous substances in concentrations | NA | Not applicable |
| above cut-off values according to the competent | | |
| authority | | |

EPA SARA Title III Extremely Hazardous Substances

| Substances | CAS Number | EPA SARA Title III Extremely Hazardous |
|--|------------|--|
| | | Substances |
| Contains no hazardous substances in concentrations | NA | Not applicable |
| above cut-off values according to the competent | | |
| authority | | |

EPA SARA (311,312) Hazard Class

None

EPA SARA (313) Chemicals

| Substances | CAS Number | Toxic Release Inventory (TRI) - | Toxic Release Inventory (TRI) - |
|--------------------------------------|------------|---------------------------------|---------------------------------|
| | | Group I | Group II |
| Contains no hazardous substances in | NA | Not applicable | Not applicable |
| concentrations above cut-off values | | | |
| according to the competent authority | | | |

EPA CERCLA/Superfund Reportable Spill Quantity

| Substances | CAS Number | CERCLA RQ |
|--|------------|----------------|
| Contains no hazardous substances in concentrations | NA | Not applicable |
| above cut-off values according to the competent | | |
| authority | | |

EPA RCRA Hazardous Waste Classification

If product becomes a waste, it does NOT meet the criteria of a hazardous waste as defined by the US EPA.

| California Proposition 65 | 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: HMIS Ratings: | Health 1, Flammability 1, Reactivity 0 Health 1, Flammability 1, Physical Hazard 0 , PPE: X |

Canadian Regulations

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

16. Other information

| Preparation Information Prepared By | Chemical Stewardship Telephone: 1-281-871-6107 e-mail: fdunexchem@halliburton.com |
|--|---|
| Revision Date: | 05-Mar-2015 |
| 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/ OSHA ECHA C&L

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End of Safety Data Sheet