

# SAFETY DATA SHEET

**Product Trade Name:** MC S-2040

**Revision Date:** 04-Mar-2016

**Revision Number:** 2

## 1. Identification

### 1.1. Product Identifier

**Product Trade Name:** MC S-2040  
**Synonyms:** None  
**Chemical Family:** Blend  
**Internal ID Code:** MC003044

### 1.2 Recommended use and restrictions on use

**Application:** Scale 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 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

Serious Eye Damage/Irritation	Category 2 - H319
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### 2.2. Label Elements

Hazard pictograms



<b>Signal Word</b>	Warning
<b>Hazard Statements</b>	H319 - Causes serious eye irritation
<b>Precautionary Statements</b>	
<b>Prevention</b>	P264 - Wash face, hands and any exposed skin thoroughly after handling P280 - Wear eye protection/face protection
<b>Response</b>	P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P337 + P313 - If eye irritation persists: Get medical advice/attention
<b>Storage</b>	None
<b>Disposal</b>	None

### 2.3 Hazards not otherwise classified

None known

## **3. Composition/information on Ingredients**

Substances	CAS Number	PERCENT (w/w)	GHS Classification - US
Phosphonic Acid Salt	Proprietary	10 - 30%	Eye Irrit. 2 (H319)

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

<b>Inhalation</b>	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Seek immediate medical attention/advice.
<b>Eyes</b>	Immediately flush eyes with large amounts of water for at least 15 minutes. Get immediate medical attention.
<b>Skin</b>	Flush skin with large amounts of water. If irritation persists, get medical attention.
<b>Ingestion</b>	Rinse mouth with water many times. Get medical attention if symptoms occur

### 4.2 Most important symptoms/effects, acute and delayed

Causes eye irritation

### 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**

Ensure adequate ventilation. Use appropriate protective equipment. 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**

Handle in accordance with good industrial hygiene and safety practice.

### **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
Phosphonic Acid Salt	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.

<b>Hand Protection</b>	Use gloves which are suitable for the chemicals present in this product as well as other environmental factors in the workplace.
<b>Skin Protection</b>	Wear impervious protective clothing, including boots, gloves, lab coat, apron, rain jacket, pants or coverall, as appropriate, to prevent skin contact.
<b>Eye Protection</b>	Safety glasses with side-shields. If splashes are likely to occur, wear: Goggles, Face-shield.
<b>Other Precautions</b>	Eyewash fountains and safety showers must be easily accessible.

## 9. Physical and Chemical Properties

### 9.1. Information on basic physical and chemical properties

<b>Physical State:</b> Liquid	<b>Color</b>	Clear to Slightly Hazy , Light Amber to Dark Amber
<b>Odor:</b> Mild	<b>Odor Threshold:</b>	No information available

<u>Property</u> <u>Remarks/ - Method</u>	<u>Values</u>
<b>pH:</b>	5.34-6.34 (10% in 1:1 IPA:H2O)
<b>Freezing Point / Range</b>	1.7 °C / 35 °F
<b>Melting Point / Range</b>	No data available
<b>Boiling Point / Range</b>	>100 °C / >212 °F
<b>Flash Point</b>	> 93.3 °C / > 200 °F
<b>Flammability (solid, gas)</b>	No data available
Upper flammability limit	No data available
Lower flammability limit	No data available
<b>Evaporation rate</b>	No data available
<b>Vapor Pressure</b>	No data available
<b>Vapor Density</b>	No data available
<b>Specific Gravity</b>	1.0431 - 1.0681
<b>Water Solubility</b>	No data available
<b>Solubility in other solvents</b>	No data available
<b>Partition coefficient: n-octanol/water</b>	No data available
<b>Autoignition Temperature</b>	No data available
<b>Decomposition Temperature</b>	No data available
<b>Viscosity</b>	No data available
<b>Explosive Properties</b>	No information available
<b>Oxidizing Properties</b>	No information available

### 9.2. Other information

<b>VOC Content (%)</b>	No data available
<b>Liquid Density</b>	8.70-8.90 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

Excessive heat

### 10.5. Incompatible materials

Strong oxidizers. Strong acids. Strong alkalis.

### 10.6. Hazardous decomposition products

Carbon oxides. Oxides of nitrogen. Oxides of phosphorus.

## **11. Toxicological Information**

### 11.1 Information on likely routes of exposure

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

### 11.2 Symptoms related to the physical, chemical and toxicological characteristics

#### **Acute Toxicity**

<b>Inhalation</b>	May cause mild respiratory irritation.
<b>Eye Contact</b>	Causes serious eye irritation.
<b>Skin Contact</b>	May cause mild skin irritation.
<b>Ingestion</b>	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
Phosphonic Acid Salt	Proprietary	>4875 mg/kg-bw (rat) (similar substance)	>3250 mg/kg (rat) (similar substance)	No data available

Substances	CAS Number	Skin corrosion/irritation
Phosphonic Acid Salt		Not irritating to skin in rabbits. (similar substances)

Substances	CAS Number	Serious eye damage/irritation
Phosphonic Acid Salt		Eye, rabbit: Causes moderate eye irritation (similar substances)

Substances	CAS Number	Skin Sensitization
Phosphonic Acid Salt		Did not cause sensitization on laboratory animals (guinea pig) (similar substances)

Substances	CAS Number	Respiratory Sensitization
Phosphonic Acid Salt		No information available

Substances	CAS Number	Mutagenic Effects
Phosphonic Acid Salt		In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects. (similar substances)

Substances	CAS Number	Carcinogenic Effects
Phosphonic Acid Salt		Did not show carcinogenic effects in animal experiments (similar substances)

Substances	CAS Number	Reproductive toxicity
Phosphonic Acid Salt		Animal testing did not show any effects on fertility. (similar substances)

Substances	CAS Number	STOT - single exposure
Phosphonic Acid Salt		No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)

Substances	CAS Number	STOT - repeated exposure
Phosphonic Acid Salt		No significant toxicity observed in animal studies at concentration requiring classification.

Substances	CAS Number	Aspiration hazard
Phosphonic Acid Salt		Not applicable

## 12. Ecological Information

### 12.1. Toxicity

#### Ecotoxicity effects

Product is not classified as hazardous to the environment.

#### Product Ecotoxicity Data

No data available

#### Substance Ecotoxicity Data

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Phosphonic Acid Salt	Proprietary	No information available	LC50 (96 h)=180-252 mg/L (Orcorhynchus mykiss) (similar substance) EC50 (48 h)>250 mg/L (Acartia tonsa) (similar substance) EC50 (72 h)=36 mg/L (Skeletonema costatum) (similar substance) (14 d)=74 mg/L (Orcorhynchus mykiss)	No information available	No information available

### 12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Phosphonic Acid Salt	Proprietary	Product is not biodegradable (7% @ 28d)

### 12.3. Bioaccumulative potential

Substances	CAS Number	Log Pow
Phosphonic Acid Salt	Proprietary	BCF<94 (similar substance)

### 12.4. Mobility in soil

Substances	CAS Number	Mobility
Phosphonic Acid Salt	Proprietary	No information available

### 12.5 Other adverse effects

No information available

## 13. Disposal Considerations

### 13.1. Waste treatment methods

#### Disposal methods

Disposal should be made in accordance with federal, state, and local regulations.

#### Contaminated Packaging

Dispose of container according to national or local regulations.

## 14. Transport Information

### US DOT

UN Number	Not restricted
UN proper shipping name	Not restricted
Transport Hazard Class(es)	Not applicable
Packing Group:	Not applicable

**Environmental Hazards** Not applicable

**Canadian TDG**

**UN Number** Not restricted  
**UN proper shipping name** Not restricted  
**Transport Hazard Class(es)** Not applicable  
**Packing Group:** Not applicable  
**Environmental Hazards** Not applicable

**IMDG/IMO**

**UN Number** Not restricted  
**UN proper shipping name** Not restricted  
**Transport Hazard Class(es)** Not applicable  
**Packing Group:** Not applicable  
**Environmental Hazards** Not applicable

**IATA/ICAO**

**UN Number** Not restricted  
**UN proper shipping name** Not restricted  
**Transport Hazard Class(es)** Not applicable  
**Packing Group:** Not applicable  
**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
Phosphonic Acid Salt	Proprietary	Not applicable

**EPA SARA Title III Extremely Hazardous Substances**

Substances	CAS Number	EPA SARA Title III Extremely Hazardous Substances
Phosphonic Acid Salt	Proprietary	Not applicable

**EPA SARA (311,312) Hazard Class**

Acute Health Hazard

**EPA SARA (313) Chemicals**

Substances	CAS Number	Toxic Release Inventory (TRI) - Group I	Toxic Release Inventory (TRI) - Group II
Phosphonic Acid Salt	Proprietary	Not applicable	Not applicable

**EPA CERCLA/Superfund Reportable Spill Quantity**

Substances	CAS Number	CERCLA RQ
Phosphonic Acid Salt	Proprietary	Not applicable

**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.

<b>California Proposition 65</b>	All components listed do not apply to the California Proposition 65 Regulation.
<b>MA Right-to-Know Law</b>	Does not apply.
<b>NJ Right-to-Know Law</b>	Does not apply.
<b>PA Right-to-Know Law</b>	Does not apply.
<b>NFPA Ratings:</b>	Health 2, Flammability 1, Reactivity 0
<b>HMS Ratings:</b>	Health 2, Flammability 1, 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:** 04-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/m<sup>3</sup> - milligram/cubic meter  
mm - millimeter  
mmHg - millimeter mercury  
w/w - weight/weight  
d - day



**Key literature references and sources for data**

[www.ChemADVISOR.com/](http://www.ChemADVISOR.com/)

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**End of Safety Data Sheet**