

SAFETY DATA SHEET

MICRO MATRIX® CEMENT RETARDER

Revision Date: 20-May-2015

Revision Number: 17

1. Product and Company Identification

Product Name

Product Trade Name: MICRO MATRIX® CEMENT RETARDER

Other Names

Synonyms: None

Product Code: HM001062

Recommended Use

Recommended Use Cement Retarder

Uses Advised Against No information available

Company Name, Address and Contact Details

Manufacturer/Supplier Halliburton New Zealand
1 Paraite Rd,
Bell Block, New Plymouth
New Zealand Registration No.: 824207

E-Mail address: fdunexchem@halliburton.com

Emergency Telephone Number +64-6-7559274

New Zealand National Poisons Centre 0800 764 766 (24 hours)

2. Hazard(s) Identification

Statement of Hazardous Nature

Classified as hazardous according to criteria in the Hazardous Substances (Minimum Degrees of Hazard) Regulation 2001;
Not Classified as dangerous good according to NZS 5433:2012, UN, IMDG or IATA

Classification

6.3A Irritating to the skin

6.4A Irritating to the eye

Hazard and Precautionary Statements

Hazard Pictograms



Signal Word

Warning

Hazard Statements

H315 - Causes skin irritation

H319 - Causes serious eye irritation

Precautionary Statements

Prevention

P103 - Read label before use

P104 - Read Safety Data Sheet before use.

P264 - Wash face, hands and any exposed skin thoroughly after handling

	P280 - Wear protective gloves/eye protection/face protection
Response	P302 + P352 - IF ON SKIN: Wash with plenty of soap and water P332 + P313 - If skin irritation occurs: Get medical advice/attention P362 - Take off contaminated clothing and wash before reuse 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
Storage	None
Disposal	P501 - Dispose of contents/container to an approved incineration plant

Contains

Substances	CAS Number	Substance HSNO Classification
Amino tri(methylenephosphonic acid)	6419-19-8	6.1E (Oral) 6.3A 6.4A
Phosphonic acid	13598-36-2	6.1D (Oral) 8.1A 8.2C 8.3A 9.3C

2.3. Other Hazards

None known

3. Composition and Information on Ingredients

Substances	CAS Number	PERCENT (w/w)
Amino tri(methylenephosphonic acid)	6419-19-8	10 - 30%
Phosphonic acid	13598-36-2	1 - 5%

4. First-Aid Measures

Requirements for First Aid or Medical Care

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, or suspected contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention immediately after flushing.
Skin	In case of contact, immediately flush skin with plenty of soap and water for at least 15 minutes. Get medical attention. Remove contaminated clothing and launder before reuse.
Ingestion	Do NOT induce vomiting. Give nothing by mouth. Obtain immediate medical attention.

Workplace Facilities Required

None

Relation to Health Effect**Most Important Symptoms/Effects**

Causes eye irritation Causes skin irritation.

Medical Attention and Special Treatment**Notes to Physician**

Treat symptomatically

5. Fire-fighting measures

Type of Hazard**Flammability Hazard**

Non-flammable

5.1. Extinguishing media

Suitable Extinguishing Media

Water fog, carbon dioxide, foam, dry chemical.

Extinguishing media which must not be used for safety reasons

None known.

HAZCHEM Code

Hazchem Code: 2X

Special Protective Equipment and Precautions for Fire Fighters

Special Protective Equipment for Fire-Fighters

Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.

Special Exposure Hazards

Decomposition in fire may produce harmful gases. Do not allow runoff to enter waterways.

6. Spillage, Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures

Use appropriate protective equipment.

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

Isolate spill and stop leak where safe. Contain spill with sand or other inert materials. Scoop up and remove.

6.4. Reference to other sections

See Section 8 and 13 for additional information.

7. Handling and storage

7.1. Precautions for Safe Handling

Handling Precautions

Avoid contact with eyes, skin, or clothing. Avoid breathing vapors. Wash hands after use. Launder contaminated clothing before reuse.

Handling Practices

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

Approved Handlers

This product does NOT require an approved handler.

7.2. Conditions for safe storage, including any incompatibilities

Store away from alkalis. Store in a cool well ventilated area. Keep container closed when not in use. Store locked up. Product has a shelf life of 60 months.

Store Site Requirements

No special controls required

Packaging

No special packaging required

8. Exposure Controls and Personal Protection

Workplace Exposure Standards

Exposure Limits

Substances	CAS Number	New Zealand WES	ACGIH TLV-TWA
Amino tri(methylenephosphonic acid)	6419-19-8	Not applicable	Not applicable
Phosphonic acid	13598-36-2	Not applicable	Not applicable

Engineering Controls

Engineering Controls

Use in a well ventilated area. Local exhaust ventilation should be used in areas without good cross ventilation.

Personal Protective Equipment (PPE)**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

Organic vapor/acid gas respirator.

Chemical-resistant protective gloves (EN 374) Suitable materials for short-term contact or splashes (recommended: at least protection index 2, corresponding to > 30 minutes permeation time as per EN 374): Nitrile gloves. (>= 0.35 mm thickness)

This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced. Manufacturer's directions for use should be observed because of great diversity of types.

Skin Protection

Rubber apron.

Eye Protection

Chemical goggles; also wear a face shield if splashing hazard exists.

Other Precautions

None known.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Physical State: Liquid

Color: Clear light yellow

Odor: Mild aromatic

Odor Threshold: No information available

PropertyValues

Remarks/ - Method

pH:

2

Freezing Point/Range

-9 °C

Melting Point/Range

No data available

Boiling Point/Range

No data available

Flash Point

> 100 °C / > 212 °F PMCC

Evaporation rate

No data available

Vapor Pressure

No data available

Vapor Density

No data available

Specific Gravity

1.15

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

10. Stability and Reactivity

10.2. Chemical Stability

Stable

10.4. Conditions to Avoid

None anticipated

10.5. Incompatible Materials

Strong alkalis.

10.6. Hazardous Decomposition Products

Oxides of nitrogen. Phosphines. Chlorine. Carbon monoxide and carbon dioxide.

Hazardous Reactions

Hazardous Polymerization: Will Not Occur

11. Toxicological Information

Health Effect from Likely Routes of Exposure

Acute Toxicity

Product Information

Under certain conditions of use, some of the product ingredients may cause the following:

Inhalation

Eye Contact

Skin Contact

Ingestion

May cause respiratory irritation.

Causes moderate eye irritation.

Causes moderate skin irritation.

Irritation of the mouth, throat, and stomach.

Chronic Effects/Carcinogenicity

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

Toxicity Data

Toxicology data for the components

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Amino tri(methylenephosphonic acid)	6419-19-8	2700 mg/kg (Rat) 2910 mg/kg (Rat) 7300 mg/kg (Rat)	> 6310 mg/kg (Rabbit)	No data available
Phosphonic acid	13598-36-2	1500 mg/kg (Rat)	No data available	No data available

Substances	CAS Number	Skin corrosion/irritation
Amino tri(methylenephosphonic acid)	6419-19-8	Not irritating to skin in rabbits.
Phosphonic acid	13598-36-2	Corrosive to skin (Rabbit)

Substances	CAS Number	Eye damage/irritation
Amino tri(methylenephosphonic acid)	6419-19-8	Eye, rabbit: Causes moderate eye irritation.
Phosphonic acid	13598-36-2	Corrosive to eyes

Substances	CAS Number	Skin Sensitization
Amino tri(methylenephosphonic acid)	6419-19-8	Did not cause sensitization on laboratory animals (guinea pig)
Phosphonic acid	13598-36-2	Not applicable due to corrosivity of the substance.

Substances	CAS Number	Respiratory Sensitization
Amino tri(methylenephosphonic acid)	6419-19-8	No information available
Phosphonic acid	13598-36-2	No information available

Substances	CAS Number	Mutagenic Effects
Amino tri(methylenephosphonic acid)	6419-19-8	In vivo tests did not show mutagenic effects. (similar substances) In vitro tests did not show mutagenic effects
Phosphonic acid	13598-36-2	In vitro tests did not show mutagenic effects

Substances	CAS Number	Carcinogenic Effects
Amino tri(methylenephosphonic acid)	6419-19-8	Did not show carcinogenic effects in animal experiments
Phosphonic acid	13598-36-2	No information available.

Substances	CAS Number	Reproductive toxicity
Amino tri(methylenephosphonic acid)	6419-19-8	Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments.
Phosphonic acid	13598-36-2	Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments.

Substances	CAS Number	STOT - single exposure
Amino tri(methylenephosphonic acid)	6419-19-8	No significant toxicity observed in animal studies at concentration requiring classification.
Phosphonic acid	13598-36-2	No significant toxicity observed in animal studies at concentration requiring classification.

Substances	CAS Number	STOT - repeated exposure
Amino tri(methylenephosphonic acid)	6419-19-8	No significant toxicity observed in animal studies at concentration requiring classification.
Phosphonic acid	13598-36-2	No significant toxicity observed in animal studies at concentration requiring classification.

Substances	CAS Number	Aspiration hazard
Amino tri(methylenephosphonic acid)	6419-19-8	Not applicable
Phosphonic acid	13598-36-2	Not applicable

12. Ecological Information

12.1. Toxicity Ecotoxicity 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
Amino tri(methylenephosphonic acid)	6419-19-8	EC50(72h): 80 mg/L (growth rate) (Skeletoneema costatum) EC50 (96h) 20 mg/L (Selenastrum)	LC50 (96h) 160 mg/L (Oncorhynchus mykiss) LC50 (96h) > 330 mg/L (Lepomis macrochirus) NOEC (14d) 47 mg/L (Oncorhynchus mykiss) NOEC (60d) 23 mg/L (Oncorhynchus mykiss)	EC0 > 250 mg/L (Pseudomonas putida) EC0 (5d) >100 mg/L (activated sludge)	EC50 (48h): 297 mg/L (Daphnia magna) LC50 (48h): 94 mg/L (Acartia tonsa) NOEC (28d): >= 25 mg/L (Daphnia magna) LC50 (48h) 94 mg/L (Acartia tonsa)
Phosphonic acid	13598-36-2	EC50(72h): 153 mg/L (Pseudokirchnerella subcapitata)	LC50(96h): > 100 mg/L (Cyprinus carpio)	No information available	EC50(48h): > 1000 mg/L (Daphnia magna)

12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Amino tri(methylenephosphonic acid)	6419-19-8	Product is not biodegradable (23% @ 28d)
Phosphonic acid	13598-36-2	

12.3. Bioaccumulative potential

Substances	CAS Number	Log Pow
Amino tri(methylenephosphonic acid)	6419-19-8	-3.53
Phosphonic acid	13598-36-2	No data available

12.4. Mobility in soil

Substances	CAS Number	Mobility
Amino tri(methylenephosphonic acid)	6419-19-8	Soluble in water KOC = 11740

Phosphonic acid	13598-36-2	No information available
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Ecotoxicity Hazard Statements

None known

12.6. Other adverse effects**Endocrine Disruptor Information**

This product does not contain any known or suspected endocrine disruptors

13. Disposal Considerations

13.1. Waste treatment methods**Disposal Method**

Disposal should be made in accordance with federal, state, and local regulations. Incineration recommended in approved incinerator according to federal, state, and local regulations. Substance should NOT be deposited into a sewage facility.

Contaminated Packaging

Follow all applicable national or 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

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

NZ 5433.1999

UN Number:	Not restricted
UN Proper Shipping Name:	Not restricted
Transport Hazard Class(es):	Not applicable
Packing Group:	Not applicable

IATA/ICAO

UN Number:	Not restricted
UN Proper Shipping Name:	Not restricted
Transport Hazard Class(es):	Not applicable
Packing Group:	Not applicable

Special Precautions for User: None**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:** Not applicable

15. Regulatory Information

New Zealand Inventory of Chemicals	All components listed on inventory or are exempt.
HSNO Approval Number	HSR002503
Group Name	Additives, Process Chemicals and Raw Materials (Subsidiary hazard HSR002503)
HSNO Controls	Refer to the NZ EPA website for more information: http://www.epa.govt.nz
Approved Handlers	Not Applicable
Poisons Schedule:	S5

16. Other information

The following sections have been revised since the last issue of this SDS

Section 2. Hazards Identification

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

bw – body weight CAS – Chemical Abstracts Service EC50 – Effective Concentration 50% LC50 – Lethal Concentration 50% LD50 – Lethal Dose 50% LL50 – Lethal Loading 50% MARPOL – International Convention for the Prevention of Pollution from Ships mg/kg – milligram/kilogram mg/L – milligram/liter NOEC – No Observed Effect Concentration OEL – Occupational Exposure Limit ppm – parts per million TWA – Time-Weighted Average VOC – Volatile Organic Carbon C - Celsius IATA/ICAO - International Air Transport Association / International Civil Aviation Organization IMDG/IMO - International Maritime Dangerous Goods / International Maritime Organization 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/
NZ CCID

Revision Date: 20-May-2015
Revision Note Revision Note
SDS sections updated:
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Disclaimer Statement

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End of Safety Data Sheet