

**MATERIAL SAFETY DATA SHEET**

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200.
Standard must be consulted for specific requirements.

71801/71801

Page 1 of 2

PRODUCT NAME: SODA ASH**Section I MANUFACTURER'S INFORMATION****MANUFACTURER'S NAME & ADDRESS:****Date Prepared: June 1, 2002**

CETCO – Drilling Products Group
1500 West Shure Drive
Arlington Heights, IL 60004

Telephone Number: 847-392-5800 Fax 847-577-5571
EMERGENCY CONTACT: CHEMTREC 800-424-9300
E-mail: www.cetco.com

Section II HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Hazardous Components (Specific Chemical Identity: Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
Particulates not otherwise classified (PNOC), total dust	15mg/m ³ (1)		10 mg/m ³ (2)	100

PRODUCT IDENTIFICATION

Chemical Name: Sodium Carbonate CAS# 497-19-8 Chemical Formula: Na₂CO₃
NFPA/HMIS: Health - 0, Fire - 0, Reactivity - 0, Specific Hazard - None
Freight Description: Oil well drilling fluid additive
Application: Calcium precipitation
DOT Class: Not a DOT/IMO Hazardous Material -- Not Regulated

Section III PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point: N.A.	Specific Gravity (H ₂ O = 1): 2.509
Vapor Pressure (mm Hg): Nil	Melting Point: 851°C / 1564°F
Vapor Density (AIR = 1): Not Applicable	Evaporation Rate (Butyl Acetate = 1): Not Applicable
Solubility in Water: @ 20°C - 33.2	Appearance and Odor: Odorless, white colored granules

Section IV FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used)	- Noncombustible	
Flammable Limits	- Not Applicable	LEL-Not Applicable UEL- Not Applicable
Extinguishing Media	- Compatible with agents used to extinguish nearby fires.	
Special Fire Fighting Procedures	- Normal protective equipment, SCBA recommended	
Unusual Fire / Explosion Hazards	- None known	
This material is not combustible. When heated to decomposition, oxides of carbon and sodium Products evolved when subjected to heat by combustion may form, producing toxic fumes.		

Section V REACTIVITY DATA

Stability	Stable -	Conditions to Avoid	- None Known
Incompatibility (Materials to Avoid)	- Reacts with hydrated lime to form caustic soda. Acid		
Hazardous Polymerization	Will Not Occur -	Conditions to Avoid	- None Known

PRODUCT NAME: SODA ASH

Section VI HEALTH HAZARD DATA

Route(s) of Entry: Inhalation? Yes Skin? Yes Ingestion? Yes Eye? Yes

Health Hazards (Acute and Chronic): Acute effects may cause mechanical irritation to eyes and respiratory tract. Dust inhalation may lead to bronchitis, emphysema, and asthma. Dermatitis may result from short contact periods. Ingestion may cause nausea, vomiting and diarrhea. There are no reported chronic effects.

Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No ACGIH? No

Toxicity Data: Oral-rat LD50: 4090 g/kg; skin-rabbit: 500 mg/24H mild; eye-rabbit: 100 mg/24H moderate.

Medical Conditions Generally Aggravated by Exposure: None Known

Emergency and First Aid Procedures:

Eyes:	Hold eyelids apart and flush eyes with water for at least 15 minutes. Seek medical attention if irritation persists.
Skin:	Wash thoroughly with soap and water. Remove contaminated clothing if needed.
Inhalation:	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult give oxygen.
Ingestion:	Drink water to dilute. Never give anything by mouth to an unconscious person. Seek medical attention.
Other:	Sensitive individuals should avoid further contact. Persons seeking medical attention should carry a copy of this MSDS with them.

Section VII PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to Be Taken in Case Material is Released or Spilled: Wear proper protective equipment. Contain spill and minimize dust. Re-package or recycle if possible, or place in a suitable waste container. Keep out of sewers and waterways.

Waste Disposal Method: Material is not classified as a hazardous waste by RCRA standards. Dispose of according to state and local regulations dealing with non-hazardous chemical waste.

Precautions to Be Taken in Handling and Storing: Keep dusts to a minimum. Keep container closed. Use with adequate ventilation. See MSDS for proper equipment.

Other Precautions: CAUTION! May cause eye, skin, and respiratory tract irritation. Treat as a nuisance dust.

Section VIII CONTROL MEASURES

Respiratory Protection (Specify Type): Wear a NIOSH/MSHA approved respirator when the airborne concentration is above the PEL

Ventilation	- Local Exhaust	- As appropriate	Special	- None
	- Mechanical (General)	- As appropriate	Other	- None

Protective Gloves: Chemical Resistant **Eye Protection:** Safety goggles

Other Protective Clothing or Equipment: None **Work/Hygienic Practices:** Use good housekeeping practices.

Section IX REGULATORY INFORMATION

Proper Shipping Name: **NOT A DOT/IMO HAZARDOUS MATERIAL**

ID Number: N/A

Hazard Class or Division: N/A

The information herein has been compiled from sources believed to be reliable and is accurate to the best of our knowledge. However, CETCO cannot give any guarantees regarding information from other sources, and expressly does not make any warranties, nor assumes any liability, for its use.



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name	HYDRAUL-EZ®
Version #	06
Revision date	20-Nov-2007
Chemical description	Powder or Granules
CAS #	Mixture
Manufacturer information	CETCO Drilling Products Group One North Arlington 1500 West Shure Drive Arlington Heights, IL 60004 US safetydata@amcol.com http://www.cetco.com/dpg/ General Information (800) 527-9948 CHEMTREC® (800) 424-9300

2. Hazards Identification

Emergency overview	Material can be slippery when wet
Potential health effects	
Routes of exposure	Inhalation.
Eyes	Dust or powder may irritate eye tissue.
Skin	Non-irritating to the skin.
Inhalation	Repeated or prolonged inhalation may cause toxic effects. For additional information on inhalation hazards, see Section 11 of this safety data sheet.
Ingestion	No significant adverse effects are expected upon ingestion of the product.
Target organs	Lungs.
Chronic effects	This product has the potential for generation of respirable dust during handling and use. Dust may contain respirable crystalline silica. Overexposure to dust may result in pneumoconiosis, a respiratory disease caused by inhalation of mineral dust, which can lead to fibrotic changes to the lung tissue, or silicosis, a respiratory disease caused by inhalation of silica dust, which can lead to inflammation and fibrosis of the lung tissue. Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled.

3. Composition / Information on Ingredients

The manufacturer lists no ingredients as hazardous according to OSHA 29 CFR 1910.1200.

Composition comments	This product contains naturally occurring crystalline silica (not listed in Annex I of Directive 67/548/EEC) in quantities less than 6%.
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4. First Aid Measures

First aid procedures	
Eye contact	Flush eyes immediately with large amounts of water. Get medical attention if irritation develops or persists.
Skin contact	No special measures required. Get medical attention if irritation develops or persists.
Inhalation	If symptoms are experienced, remove source of contamination or move victim to fresh air. If the affected person is not breathing, apply artificial respiration. If breathing is difficult, give oxygen. Call a physician if symptoms develop or persist.
Ingestion	No special measures required. If ingestion of a large amount does occur, seek medical attention.
Notes to physician	Provide general supportive measures and treat symptomatically.

5. Fire Fighting Measures

Flammable properties	None known.
Extinguishing media	
Suitable extinguishing media	Use any media suitable for the surrounding fires. Dry chemical, CO ₂ , water spray or regular foam.
Protection of firefighters	
Protective equipment and precautions for firefighters	Material can be slippery when wet

6. Accidental Release Measures

Personal precautions	Material can be slippery when wet. Wear a dust mask if dust is generated above exposure limits.
Environmental precautions	No special environmental precautions required.
Methods for containment	None necessary.
Methods for cleaning up	Avoid the generation of dusts during clean-up. Collect dust or particulates using a vacuum cleaner with a HEPA filter. Reduce airborne dust and prevent scattering by moistening with water.

7. Handling and Storage

Handling	Keep formation of airborne dusts to a minimum. Provide appropriate exhaust ventilation at places where dust is formed. In case of insufficient ventilation, wear suitable respiratory equipment.
Storage	Guard against dust accumulation of this material. No special storage conditions required. No special restrictions on storage with other products.

8. Exposure Controls / Personal Protection

Occupational exposure limits

ACGIH

Constituents	CAS #	Type	Value	Form
NUISANCE PARTICULATES	RR-00072-6	TWA	3 mg/m ³	
		TWA (inhalable particles, reco	10 mg/m ³	(inhalable particles, recommended)
QUARTZ	14808-60-7	TWA	0.025 mg/m ³	(respirable fraction)

U.S. - OSHA

Constituents	CAS #	Type	Value	Form
NUISANCE PARTICULATES	RR-00072-6	TWA	5 mg/m ³	(respirable fraction)
		TWA (total dust)	15 mg/m ³	(total dust)

Exposure guidelines	Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled.
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ACGIH - Threshold Limits Values - Time Weighted Averages (TLV-TWA)

NUISANCE PARTICULATES	RR-00072-6	10 Mg/m ³ TWA (inhalable particles, recommended); 3 mg/m ³ TWA (respirable particles, recommended)
QUARTZ	14808-60-7	0.025 Mg/m ³ TWA (respirable fraction)

ACGIH - Threshold Limits Values - TLV Basis - Critical Effects

QUARTZ	14808-60-7	lung cancer; pulmonary fibrosis
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U.S. - OSHA - Final PELs - Table Z-3 Mineral Dusts

QUARTZ	14808-60-7	((250)/(%SiO ₂ + 5) mppcf TWA (respirable)); ((10)/(%SiO ₂ + 2) mg/m ³ TWA (respirable)); ((30)/(%SiO ₂ + 2) mg/m ³ TWA (total dust))
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U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)

NUISANCE PARTICULATES	RR-00072-6	15 Mg/m ³ TWA (total dust); 5 mg/m ³ TWA (respirable fraction)
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Engineering controls	If material is ground, cut, or used in any operation which may generate dusts, use appropriate local exhaust ventilation to keep exposures below the recommended exposure limits. If engineering measures are not sufficient to maintain concentrations of dust particulates below the OEL, suitable respiratory protection must be worn.
Personal protective equipment	
Eye / face protection	Wear dust goggles.
Skin protection	No special protective equipment required.
Respiratory protection	Use a particulate filter respirator for particulate concentrations exceeding the Occupational Exposure Limit.
General hygiene considerations	Eye wash fountain is recommended. Use good industrial hygiene practices in handling this material.

9. Physical & Chemical Properties

Appearance	Not available.
Color	Various.
Odor	None.
Odor threshold	Not available.
Physical state	Solid.
Form	Granular. Powder. Pellets. or Chips.
PH	7 - 9
Melting point	Not available.
Freezing point	Not available.
Boiling point	2192 °F (1200 °C) estimated
Flash point	Non-flammable
Evaporation rate	Not available.
Flammability	Not available.
Flammability limits in air, upper, % by volume	Non-explosive
Flammability limits in air, lower, % by volume	Non-explosive
Vapor pressure	Not available.
Vapor density	Not available.
Specific gravity	0.012 estimated
Relative density	0.012 lb/cu ft estimated
Solubility (water)	Negligible
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
VOC	0 % estimated
Percent volatile	0 % estimated

10. Chemical Stability & Reactivity Information

Chemical stability	Stable at normal conditions.
Conditions to avoid	None known.
Incompatible materials	None known.
Hazardous decomposition products	None known.
Possibility of hazardous reactions	Will not occur.

11. Toxicological Information

Component analysis - LD50

Toxicology Data - Selected LD50s and LC50s

QUARTZ 14808-60-7 Oral LD50 Rat: 500 mg/kg

Chronic effects

In 1997, IARC (the International Agency for Research on Cancer) concluded that crystalline silica inhaled from occupational sources can cause lung cancer in humans. However in making the overall evaluation, IARC noted that "carcinogenicity was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs." (IARC Monographs on the evaluation of the carcinogenic risks of chemicals to humans, Silica, silicates dust and organic fibres, 1997, Vol. 68, IARC, Lyon, France.)

In June 2003, SCOEL (the EU Scientific Committee on Occupational Exposure Limits) concluded that the main effect in humans of the inhalation of respirable crystalline silica dust is silicosis. "There is sufficient information to conclude that the relative risk of lung cancer is increased in persons with silicosis (and, apparently, not in employees without silicosis exposed to silica dust in quarries and in the ceramic industry). Therefore, preventing the onset of silicosis will also reduce the cancer risk..." (SCOEL SUM Doc 94-final, June 2003)

According to the current state of the art, worker protection against silicosis can be consistently assured by respecting the existing regulatory occupational exposure limits. Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled.

Carcinogenicity

ACGIH - Threshold Limits Values - Carcinogens

QUARTZ 14808-60-7 A2 - Suspected Human Carcinogen

IARC - Group 1 (Carcinogenic to Humans)

QUARTZ 14808-60-7 Monograph 68 [1997] (listed under Crystalline silica inhaled in the form of quartz or cristobalite from occupational sources)

NTP (National Toxicology Program) - Report on Carcinogens - Known Carcinogens

QUARTZ 14808-60-7 Known Carcinogen

12. Ecological Information

Ecotoxicity

This material is not expected to be harmful to aquatic life.

Environmental effects

Based on the physical properties of this product, significant environmental persistence and bioaccumulation would not be expected.

Persistence and degradability

Not available.

13. Disposal Considerations

Disposal instructions

Dispose in accordance with all applicable regulations. Material should be recycled if possible.

14. Transport Information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

15. Regulatory Information

US federal regulations

OSHA Process Safety Standard: This material is not known to be hazardous by the OSHA Highly Hazardous Process Safety Standard, 29 CFR 1910.119.

CERCLA (Superfund) reportable quantity

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - No
Delayed Hazard - Yes
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance No

Section 311 hazardous chemical Yes

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of New and Existing Chemicals (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

State regulations

WARNING: This product contains a chemical known to the State of California to cause cancer.

U.S. - California - Proposition 65 - Carcinogens List

QUARTZ 14808-60-7 carcinogen, initial date 10/1/88 (airborne particles of respirable size)

U.S. - New Jersey - Right to Know Hazardous Substance List

QUARTZ 14808-60-7 sn 1660

U.S. - Pennsylvania - RTK (Right to Know) List

QUARTZ 14808-60-7 Present

16. Other Information

Recommended restrictions

Workers (and your customers or users in the case of resale) should be informed of the potential presence of respirable dust and respirable crystalline silica as well as their potential hazards. Appropriate training in the proper use and handling of this material should be provided as required under applicable regulations.

Further information

This safety datasheet only contains information relating to safety and does not replace any product information or product specification.

HMIS ratings

HMIS®	HMIS®	HMIS®	HMIS®	HMIS®	HMIS®	HMIS®
HEALTH	*	1	FLAMMABILITY	0	PHYSICAL HAZARD	0
PERSONAL PROTECTION						

NFPA ratings

Health: 1
Flammability: 0
Instability: 0

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The manufacturer expressly does not make any representations, warranties, or guarantees as to its accuracy, reliability or completeness nor assumes any liability, for its use. It is the user's responsibility to verify the suitability and completeness of such information for each particular use.

Third party materials: Insofar as materials not manufactured or supplied by this manufacturer are used in conjunction with, or instead of this product, it is the responsibility of the customer to obtain, from the manufacturer or supplier, all technical data and other properties relating to these and other materials and to obtain all necessary information relating to them. No liability can be accepted in respect of the use of this product in conjunction with materials from another supplier.

Issue date

20-Nov-2007

This data sheet contains changes from the previous version in section(s):

Composition / Information on Ingredients: Composition comments
Regulatory Information: US federal regulations
Regulatory Information: State regulations
Other Information: Other information

Other information

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MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name INSTA-VIS™ PLUS
Revision date 07-05-2007
Chemical name Anionic polyacrylamide emulsion
CAS # Mixture
Company information CETCO
Drilling Products Group
One North Arlington
1500 West Shure Drive
Arlington Heights, IL 60004
USA
Emergency CHEMTREC (800) 424-9300
General information (800) 527-9948

2. Hazards Identification

Potential health effects

Eyes Causes eye irritation. Symptoms include itching, burning, redness and tearing.
Skin Contact may irritate or burn skin. Symptoms may include redness, edema, drying, defatting and cracking of the skin.
Inhalation High vapor concentrations are irritating to the eyes, nose, throat, and lungs.
Ingestion Small amounts (a tablespoonful) swallowed during normal handling operations are not likely to cause injury; swallowing amounts larger than that may cause injury. Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea.

3. Composition / Information on Ingredients

Components	CAS #	Percent
Petroleum distillates, hydrotreated light	64742-47-8	20 - 40
Non-hazardous and other components below reportable levels		60 - 80
Composition comments	This product contains trace levels (<0.1%) of a potential carcinogen.	

4. First Aid Measures

First aid procedures

Eye contact Immediately flush eyes with plenty of water for at least 20 minutes. Get medical attention if irritation develops or persists.
Skin contact Immediately flush skin with running water for at least 20 minutes. Remove and isolate contaminated clothing and shoes. Launder contaminated clothing before reuse. Get medical attention if irritation develops or persists.
Inhalation If gas/fume/vapor/dust/mist from the material is inhaled, remove the affected person immediately to fresh air. Call a physician if symptoms develop or persist.
Ingestion Product is not considered toxic in small amounts. No need for first aid is anticipated if material is swallowed.

5. Fire Fighting Measures

Flammable properties Not a fire hazard.
Unusual fire & explosion hazards None known.
Extinguishing media
Suitable extinguishing media Dry chemical, CO2, water spray or regular foam.
Fire fighting equipment/instructions Material can be slippery when wet
Protection of firefighters
Protective equipment for firefighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. Accidental Release Measures

Personal precautions	Material can be slippery when wet. Forms smooth, slippery surfaces on floors, posing an accident risk. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system.
Methods for containment	Stop leak if you can do so without risk. Dike the spilled material, where this is possible.
Methods for cleaning up	Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. After removal flush contaminated area thoroughly with water.

7. Handling and Storage

Handling	Forms smooth, slippery surfaces on floors, posing an accident risk.
Storage	Keep containers tightly closed in a dry, cool and well-ventilated place. Do not freeze. Keep at temperatures between 0 and 30°C.

8. Exposure Controls / Personal Protection

Engineering controls	Ensure adequate ventilation, especially in confined areas. Ventilation should effectively remove and prevent buildup of any vapor/mist/fume/dust generated from the handling of this product.
Personal protective equipment	
Eye / face protection	Wear chemical goggles and face shield.
Skin protection	Use impervious gloves. Normal work clothing (long sleeved shirts and long pants) is recommended. Wear oil-impervious garments if contact is unavoidable.
Respiratory protection	No personal respiratory protective equipment normally required. If mist is generated (heating, spraying) and engineering controls are not sufficient, wear approved organic vapor respirator suitable for oil mist.
General hygiene considerations	Use good industrial hygiene practices in handling this material. Wash hands before breaks and immediately after handling the product. Eye wash fountain and emergency showers are recommended.

9. Physical & Chemical Properties

Appearance	Viscous.
Color	White. Milky.
Form	Liquid.
Odor	Aliphatic.
Odor threshold	Not available
Physical state	Liquid
pH	6 - 8
Melting point	Not available
Freezing point	Not available
Boiling point	Not available
Flash point	> 212.0 °F (> 100 °C)
Evaporation rate	Not available
Flammability limits in air, lower, % by volume	Not available
Flammability limits in air, upper, % by volume	Not available
Vapor pressure	0.002 Mm Hg @ 20C
Vapor density	Not available
Specific gravity	0.021 estimated
Relative density	0.1756 estimated
Solubility (H2O)	Limited by viscosity
Octanol/H2O coeff	Not available
Auto-ignition temperature	> 392.0 °F (> 200 °C)
Decomposition temperature	Not available

10. Chemical Stability & Reactivity Information

Chemical stability	Stable at normal conditions.
Conditions to avoid	None known.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	At thermal decomposition temperatures, carbon monoxide and carbon dioxide.
Hazardous polymerization	Will not occur.

11. Toxicological Information

Acute effects	Acute LD50: 2000 mg/kg, Rat, Oral Acute LD50: 9302 mg/kg, Rat, Dermal Acute LC50: 22 mg/l/4h, Rat, Inhalation
Skin	Repeated or prolonged exposure may cause skin irritation and dermatitis, due to degreasing properties of the product.
Carcinogenicity	This product contains trace levels (<0.1%) of a potential carcinogen.

12. Ecological Information

Ecotoxicity	Not readily biodegradable (40 % after 28 days). > 15 mg/l, Daphnia, 48.00 Hours, LC50 357 mg/l, Fish, 96.00 Hours, LC50
Environmental effects	Based on the physical properties of this product, significant environmental persistence and bioaccumulation would not be expected.

13. Disposal Considerations

Disposal instructions	Dispose in accordance with all applicable regulations.
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14. Transport Information

Department of Transportation (DOT) Requirements

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

15. Regulatory Information

US federal regulations	OSHA Process Safety Standard: This material is not known to be hazardous by the OSHA Highly Hazardous Process Safety Standard, 29 CFR 1910.119.
Occupational Safety and Health Administration (OSHA)	
29 CFR 1910.1200 hazardous chemical	Yes
State regulations	WARNING: This product contains a chemical known to the State of California to cause cancer.
Superfund Amendments and Reauthorization Act of 1986 (SARA)	
Hazard categories	Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No
Section 302 extremely hazardous substance	No
Section 311 hazardous chemical	Yes
CERCLA (Superfund) reportable quantity	Acrylamide: 5000.0000
WHMIS status	Controlled
WHMIS classification	D1A - Immediate/Serious-VERY TOXIC

**Inventory status**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (CCS)	Yes
Europe	European Inventory of New and Existing Chemicals (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Japanese Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Korean Inventory of Chemicals (KICS)	Yes
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other Information**Further information**

This safety datasheet only contains information relating to safety and does not replace any product information or product specification.

HMIS ratings

Health: 1
Flammability: 1
Physical hazard: 0

NFPA ratings

Health: 1
Flammability: 1
Instability: 0

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The manufacturer expressly does not make any representations, warranties, or guarantees as to its accuracy, reliability or completeness nor assumes any liability, for its use. It is the user's responsibility to verify the suitability and completeness of such information for each particular use.

Third party materials: Insofar as materials not manufactured or supplied by this manufacturer are used in conjunction with, or instead of this product, it is the responsibility of the customer to obtain, from the manufacturer or supplier, all technical data and other properties relating to these and other materials and to obtain all necessary information relating to them. No liability can be accepted in respect of the use of this product in conjunction with materials from another supplier.

Issue date

07-05-2007

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name	SUSPEND-IT™
Revision date	07-13-2007
CAS #	11138-66-2
Synonym(s)	XANTHAN GUM
Company information	CETCO Drilling Products Group One North Arlington 1500 West Shure Drive Arlington Heights, IL 60004 USA

2. Hazards Identification

Emergency overview	Material can be slippery when wet. Product may form explosive dust/air mixtures if high concentration of product dust is suspended in air.
OSHA regulatory status	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.
Potential health effects	
Routes of exposure	Eye contact Inhalation.
Eyes	Dust or powder may irritate eye tissue.
Skin	Substance may cause slight skin irritation. No components in this product are known to be absorbed through the skin.
Inhalation	Inhalation of dusts may cause respiratory irritation.
Ingestion	No significant adverse effects are expected upon ingestion of the product.

3. Composition / Information on Ingredients

The manufacturer lists no ingredients as hazardous according to OSHA 29 CFR 1910.1200.

4. First Aid Measures

First aid procedures	
Eye contact	Immediately flush eyes with plenty of water for at least 20 minutes. Get medical attention if irritation develops or persists.
Skin contact	Wash affected area with mild soap and water. Get medical attention if irritation develops or persists.
Inhalation	If exposed to excessive levels of dusts or fumes, remove to fresh air and get medical attention if cough or other symptoms develop.
Ingestion	No special measures required
Notes to physician	Provide general supportive measures and treat symptomatically.
General advice	If you feel unwell, seek medical advice (show the label where possible).

5. Fire Fighting Measures

Flammable properties	This product is combustible at high temperatures.
Unusual fire & explosion hazards	Dust concentrations greater than 0.03 oz/ft ³ may ignite at 590° C or when exposed to ignition source.
Extinguishing media	
Suitable extinguishing media	Dry chemical, CO ₂ , water spray or regular foam.
Fire fighting equipment/instructions	Material can be slippery when wet. Move containers from fire area if you can do it without risk.

Protection of firefighters

Protective equipment for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. Accidental Release Measures

Personal precautions

Material can be slippery when wet. Ensure adequate ventilation. Avoid inhalation of dust from the spilled material. Wear a dust mask if dust is generated above exposure limits. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Environmental precautions

Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so.

Methods for containment

Stop leak if you can do so without risk.

Methods for cleaning up

Sweep up or gather material and place in appropriate container for disposal. Avoid the generation of dusts during clean-up.

7. Handling and Storage

Handling

Material can be slippery when wet. Keep formation of airborne dusts to a minimum. Take measures to prevent the build up of electrostatic charge. Provide appropriate exhaust ventilation at places where dust is formed. Refer to NFPA Pamphlet No. 654, "Prevention of Fire and Dust Explosions in the Chemical, Dye, Pharmaceutical, and Plastics Industries."

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Guard against dust accumulation of this material. Keep out of the reach of children.

8. Exposure Controls / Personal Protection

Exposure guidelines

ACGIH - Threshold Limits Values - Time Weighted Averages (TLV-TWA)

Particulates (Inert Dust) RR-00072-6 10 Mg/m³ TWA (inhalable particles, recommended); 3 mg/m³ TWA (respirable particles, recommended)

Canada - Alberta - Occupational Exposure Limits - TWAs

Particulates (Inert Dust) RR-00072-6 10 Mg/m³ TWA (total particulate); 3 mg/m³ TWA (respirable particulate)

Canada - British Columbia - Occupational Exposure Limits - TWAs

Particulates (Inert Dust) RR-00072-6 10 Mg/m³ TWA (total dust); 3 mg/m³ TWA (respirable fraction)

Canada - Manitoba - Occupational Exposure Limits - TWAs

Particulates (Inert Dust) RR-00072-6 10 Mg/m³ TWA (total dust containing no asbestos and <1% free silica)

Canada - Ontario - Occupational Exposure Limits - TWAEVs

Particulates (Inert Dust) RR-00072-6 10 Mg/m³ TWAEV (inhalable); 3 mg/m³ TWAEV (respirable)

Canada - Quebec - Occupational Exposure Limits - TWAEVs

Particulates (Inert Dust) RR-00072-6 10 Mg/m³ TWAEV (total dust, containing no asbestos and less than 1% crystalline silica)

U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)

Particulates (Inert Dust) RR-00072-6 15 Mg/m³ TWA (total dust); 5 mg/m³ TWA (respirable fraction)

Engineering controls

Ensure adequate ventilation, especially in confined areas. If material is ground, cut, or used in any operation which may generate dusts, use appropriate local exhaust ventilation to keep exposures below the recommended exposure limits. If engineering measures are not sufficient to maintain concentrations of dust particulates below the OEL, suitable respiratory protection must be worn.

Personal protective equipment

Eye / face protection

Wear safety glasses with side shields.

Respiratory protection

Use a particulate filter respirator for particulate concentrations exceeding the Occupational Exposure Limit.

Skin and body protection

Normal work clothing (long sleeved shirts and long pants) is recommended.

General hygiene considerations

Use good industrial hygiene practices in handling this material. Wash hands before breaks and immediately after handling the product.

9. Physical & Chemical Properties

Appearance

Powder.

Color

Off-white.

Odor

Flour-like

Odor threshold

Not available

Physical state

Solid

pH	5.5 - 8.5
Melting point	Not available
Freezing point	Not available
Boiling point	Not available
Flash point	> 199.4 °F (> 93 °C)
Evaporation rate	Not available
Flammability limits in air, lower, % by volume	Not available
Flammability limits in air, upper, % by volume	Not available
Vapor pressure	Not available
Vapor density	Not available
Specific gravity	Not available
Solubility (H2O)	Soluble
Octanol/H2O coeff	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available

10. Chemical Stability & Reactivity Information

Chemical stability	Stable at normal conditions.
Conditions to avoid	Heat, flames and sparks. Dust cloud ignition temperature 590°C.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.
Hazardous polymerization	Will not occur.

11. Toxicological Information

Routes of exposure	Eye contact Inhalation.
Carcinogenicity	Not listed by ACGIH, IARC, NIOSH, NTP OR OSHA.
Mutagenicity	No data available for this product.
Teratogenicity	No data available for this product.
Further information	This product has no known adverse effect on human health.

12. Ecological Information

Ecotoxicity	This product is not expected to produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems. No data is available on the product itself.
Environmental effects	No data available for this product.

13. Disposal Considerations

Disposal instructions	Dispose in accordance with all applicable regulations.
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14. Transport Information

Department of Transportation (DOT) Requirements

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

15. Regulatory Information

US federal regulations	This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
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OSHA Process Safety Standard: This material is not known to be hazardous by the OSHA Highly Hazardous Process Safety Standard, 29 CFR 1910.119.

Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 hazardous chemical No

Food and Drug Administration (FDA) Total food additive
Direct food additive
Indirect food additive

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance No

Section 311 hazardous chemical No

CERCLA (Superfund) reportable quantity None

WHMIS status Non-controlled

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (CCS)	Yes
Europe	European Inventory of New and Existing Chemicals (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Japanese Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Korean Inventory of Chemicals (KICS)	Yes
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other Information

Further information This safety datasheet only contains information relating to safety and does not replace any product information or product specification.

HMIS ratings Health: 0
Flammability: 0
Physical hazard: 0

NFPA ratings Health: 0
Flammability: 0
Instability: 0

Disclaimer The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The manufacturer expressly does not make any representations, warranties, or guarantees as to its accuracy, reliability or completeness nor assumes any liability, for its use. It is the user's responsibility to verify the suitability and completeness of such information for each particular use.

Third party materials: Insofar as materials not manufactured or supplied by this manufacturer are used in conjunction with, or instead of this product, it is the responsibility of the customer to obtain, from the manufacturer or supplier, all technical data and other properties relating to these and other materials and to obtain all necessary information relating to them. No liability can be accepted in respect of the use of this product in conjunction with materials from another supplier.

Issue date 07-13-2007



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name	REL-PAC®
Revision date	07-10-2007
Chemical name	Polyanionic Cellulose
CAS #	Mixture
Company information	CETCO Drilling Products Group One North Arlington 1500 West Shure Drive Arlington Heights, IL 60004 USA
Emergency	CHEMTREC (800) 424-9300
General information	(800) 527-9948

2. Hazards Identification

Emergency overview	No hazards resulting from the material as supplied. Health injuries are not known or expected under normal use.
OSHA regulatory status	This product is considered not hazardous under 29 CFR 1910.1200 (Hazard Communication).
Potential health effects	
Eyes	Contact with eyes may cause irritation.
Skin	Health injuries are not known or expected under normal use. Not expected to be a primary skin irritant.
Inhalation	Health injuries are not known or expected under normal use. May cause irritation of respiratory tract.
Ingestion	Health injuries are not known or expected under normal use.

3. Composition / Information on Ingredients

The manufacturer lists no ingredients as hazardous according to OSHA 29 CFR 1910.1200.

Composition comments	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
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4. First Aid Measures

First aid procedures	
Eye contact	Flush eyes with water as a precaution. Get medical attention if irritation develops or persists.
Skin contact	Wash off with soap and water. Rinse with water. Get medical attention if irritation develops or persists.
Inhalation	Remove to fresh air. Call a physician if symptoms develop or persist.
Ingestion	Have victim rinse mouth thoroughly with water. Give several glasses of water. If ingestion of a large amount does occur, seek medical attention.
General advice	If you feel unwell, seek medical advice (show the label where possible).

5. Fire Fighting Measures

Flammable properties	Not a fire hazard. Container may explode in heat of fire.
Unusual fire & explosion hazards	Dusts at sufficient concentrations can form explosive mixtures with air.
Extinguishing media	
Suitable extinguishing media	Dry chemical, CO2, water spray or regular foam.
Protection of firefighters	
Protective equipment for firefighters	Wear self contained breathing apparatus for fire fighting if necessary.

6. Accidental Release Measures

Personal precautions	Ventilate closed spaces before entering. Material can be slippery when wet
Environmental precautions	Prevent further leakage or spillage if safe to do so.
Methods for containment	Stop leak if you can do so without risk.
Methods for cleaning up	Sweep up or gather material and place in appropriate container for disposal.

7. Handling and Storage

Handling	Keep formation of airborne dusts to a minimum. Use this product with adequate ventilation. Use spark-proof tools and explosion-proof equipment.
Storage	Keep the container dry. Store at room temperature in the original container.

8. Exposure Controls / Personal Protection

Exposure guidelines	Contains no substances with occupational exposure limit values.
ACGIH - Threshold Limits Values - Time Weighted Averages (TLV-TWAs)	
Particulates (Inert Dust)	RR-00072-6 10 Mg/m3 TWA (inhalable particles, recommended); 3 mg/m3 TWA (respirable particles, recommended)
Canada - Alberta - Occupational Exposure Limits - TWAs	
Particulates (Inert Dust)	RR-00072-6 10 Mg/m3 TWA (total particulate); 3 mg/m3 TWA (respirable particulate)
Canada - British Columbia - Occupational Exposure Limits - TWAs	
Particulates (Inert Dust)	RR-00072-6 10 Mg/m3 TWA (total dust); 3 mg/m3 TWA (respirable fraction)
Canada - Manitoba - Occupational Exposure Limits - TWAs	
Particulates (Inert Dust)	RR-00072-6 10 Mg/m3 TWA (total dust containing no asbestos and <1% free silica)
Canada - Ontario - Occupational Exposure Limits - TWAEVs	
Particulates (Inert Dust)	RR-00072-6 10 Mg/m3 TWAEV (inhalable); 3 mg/m3 TWAEV (respirable)
Canada - Quebec - Occupational Exposure Limits - TWAEVs	
Particulates (Inert Dust)	RR-00072-6 10 Mg/m3 TWAEV (total dust, containing no asbestos and less than 1% crystalline silica)
U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)	
Particulates (Inert Dust)	RR-00072-6 15 Mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)
Engineering controls	Use local exhaust ventilation.
Personal protective equipment	
Eye / face protection	Not normally needed.
Skin protection	Not normally needed.
Respiratory protection	Use a particulate filter respirator for particulate concentrations exceeding the Occupational Exposure Limit.
General hygiene considerations	Use good industrial hygiene practices in handling this material.

9. Physical & Chemical Properties

Appearance	Free flowing wettable powder.
Color	Off-white.
Form	Powder.
Odor	None.
Odor threshold	Not available
Physical state	Solid
pH	6 - 8.5 (1% solution)
Melting point	1473.8 °F (801 °C) estimated
Freezing point	Not available
Boiling point	2661.8 °F (1461 °C) estimated
Flash point	Not available
Evaporation rate	Not available
Flammability limits in air, lower, % by volume	Not available
Flammability limits in air, upper, % by volume	Not available
Vapor pressure	Not available
Vapor density	Not available
Specific gravity	0.0325 estimated
Relative density	0.2713 estimated

Solubility (H2O)	Soluble @ 20 C
Octanol/H2O coeff	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
VOC (Weight %)	85 % estimated
Viscosity	10 - 12 MPas (1% Solution, 25 C Brookfield LV; 30 rpm)
Bulk density	300 - 900 g/cm3

10. Chemical Stability & Reactivity Information

Conditions to avoid	Risk of dust explosion.
Incompatible materials	None known.
Hazardous decomposition products	None known.
Hazardous polymerization	Will not occur.

11. Toxicological Information

Acute effects	Acute LD50: 21000 mg/kg, Rat, Oral Acute LC50: 6824 mg/l/4h, Rat, Inhalation
Mutagenicity	Not mutagenic in AMES Test.
Teratogenicity	No data available to indicate product or any components present at greater than 0.1% may cause birth defects.
Further information	This product has no known adverse effect on human health.

12. Ecological Information

Ecotoxicity	This material is not expected to be harmful to aquatic life. Inherently biodegradable.
Environmental effects	Ecological injuries are not known or expected under normal use.

13. Disposal Considerations

Disposal instructions	Dispose in accordance with all applicable regulations.
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14. Transport Information

Department of Transportation (DOT) Requirements

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

15. Regulatory Information

US federal regulations	OSHA Process Safety Standard: This material is not known to be hazardous by the OSHA Highly Hazardous Process Safety Standard, 29 CFR 1910.119.
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Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 hazardous chemical	No
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State regulations	This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.
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Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - No Delayed Hazard - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No
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Section 302 extremely hazardous substance	No
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Section 311 hazardous chemical	No
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CERCLA (Superfund) reportable quantity	None
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WHMIS status Non-controlled

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (CCS)	Yes
Europe	European Inventory of New and Existing Chemicals (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Japanese Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Korean Inventory of Chemicals (KICS)	Yes
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other Information

Further information This safety datasheet only contains information relating to safety and does not replace any product information or product specification.

HMIS ratings Health: 0
Flammability: 0
Physical hazard: 0

NFPA ratings Health: 0
Flammability: 0
Instability: 0

Disclaimer The manufacturer expressly does not make any representations, warranties, or guarantees as to its accuracy, reliability or completeness nor assumes any liability, for its use. It is the user's responsibility to verify the suitability and completeness of such information for each particular use. The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication.

Third party materials: Insofar as materials not manufactured or supplied by this manufacturer are used in conjunction with, or instead of this product, it is the responsibility of the customer to obtain, from the manufacturer or supplier, all technical data and other properties relating to these and other materials and to obtain all necessary information relating to them. No liability can be accepted in respect of the use of this product in conjunction with materials from another supplier.

Issue date 07-10-2007



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name	DRILL-TERGE™
Revision date	05-07-2007
CAS #	Mixture
Company information	CETCO Drilling Products Group One North Arlington 1500 West Shure Drive Arlington Heights, IL 60004 USA
Emergency	CHEMTREC (800) 424-9300
General information	(800) 527-9948

2. Hazards Identification

Potential health effects

Eyes	This product may cause slight irritation to the eyes.
Skin	Prolonged and/or repeated skin contact may result in mild irritation or redness.
Inhalation	Inhalation of vapors or mists of the product may be irritating to the respiratory system.
Ingestion	Ingestion of large amounts may produce gastrointestinal disturbances including irritation, nausea, and diarrhea.

3. Composition / Information on Ingredients

The manufacturer lists no ingredients as hazardous according to OSHA 29 CFR 1910.1200.

Composition comments	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
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4. First Aid Measures

First aid procedures

Eye contact	Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. If irritation persists get medical attention.
Skin contact	Immediately take off all contaminated clothing. Launder contaminated clothing before reuse. Immediately flush skin with plenty of water. Get medical attention if irritation develops or persists.
Inhalation	If gas/fume/vapor/dust/mist from the material is inhaled, remove the affected person immediately to fresh air. If symptoms persist, get medical attention.
Ingestion	If material is ingested, immediately contact a physician or poison control center.

5. Fire Fighting Measures

Flammable properties	This material will not burn.
Unusual fire & explosion hazards	Pressurized container may explode when exposed to heat or flame.
Extinguishing media	
Suitable extinguishing media	Use methods for the surrounding fire. Dry chemical, CO2, water spray or regular foam.
Fire fighting equipment/instructions	Cool containers with flooding quantities of water until well after fire is out. Move containers from fire area if you can do it without risk.
Protection of firefighters	
Protective equipment for firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. Accidental Release Measures

Personal precautions	Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
Environmental precautions	No special environmental precautions required.
Methods for containment	Stop leak if you can do so without risk.

Methods for cleaning up	Flush with plenty of water. Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container.
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7. Handling and Storage

Handling	Keep away from heat and flame.
Storage	Keep in a cool, well-ventilated place.

8. Exposure Controls / Personal Protection

Engineering controls	Good general ventilation should be sufficient to control airborne levels. Local exhaust is suggested for use, where possible, in enclosed or confined spaces.
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Personal protective equipment

Eye / face protection	Wear chemical goggles.
Skin protection	Wear appropriate chemical resistant gloves. The use of natural rubber gloves is recommended.
Respiratory protection	Not normally needed. If ventilation is not sufficient to effectively prevent buildup of aerosols or vapors, appropriate NIOSH/MSHA respiratory protection must be provided.
General hygiene considerations	Use good industrial hygiene practices in handling this material. Eye wash fountain is recommended.

9. Physical & Chemical Properties

Appearance	Clear.
Color	Blue.
Odor	Slight.
Odor threshold	Not available
Physical state	Liquid
pH	Not available
Melting point	Not available
Freezing point	Not available
Boiling point	190 °F (87.8 °C)
Flash point	Not available
Evaporation rate	Slower than ether
Flammability limits in air, lower, % by volume	Not available
Flammability limits in air, upper, % by volume	Not available
Vapor pressure	Heavier than air
Vapor density	Not available
Specific gravity	1.08
Solubility (H₂O)	Complete
Octanol/H₂O coeff	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available

10. Chemical Stability & Reactivity Information

Chemical stability	Stable at normal conditions.
Conditions to avoid	Avoid temperatures above 190°F (87.8°C).
Incompatible materials	Strong acids, alkalies and oxidizing agents.
Hazardous decomposition products	Upon decomposition, this product may yield oxides of nitrogen and ammonia, carbon dioxide, carbon monoxide and other low molecular weight hydrocarbons.
Hazardous polymerization	Will not occur.

11. Toxicological Information

Not available

12. Ecological Information

Ecotoxicity	This product is not expected to produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems.
Environmental effects	Based on the physical properties of this product, significant environmental persistence and bioaccumulation would not be expected.

13. Disposal Considerations

Disposal instructions	Dispose in accordance with all applicable regulations.
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14. Transport Information

Department of Transportation (DOT) Requirements

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

15. Regulatory Information

US federal regulations	This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
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CERCLA (Superfund) reportable quantity	None
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Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - No Delayed Hazard - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No
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Section 302 extremely hazardous substance	No
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Section 311 hazardous chemical	No
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WHMIS status	Non-controlled
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Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (CCS)	No
Europe	European Inventory of New and Existing Chemicals (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Japanese Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Korean Inventory of Chemicals (KICS)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

State regulations	This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.
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16. Other Information

Further information	This safety datasheet only contains information relating to safety and does not replace any product information or product specification.
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HMIS ratings	Health: 0 Flammability: 0 Physical hazard: 0
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NFPA ratings

Health: 0
Flammability: 0
Instability: 0

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The manufacturer expressly does not make any representations, warranties, or guarantees as to its accuracy, reliability or completeness nor assumes any liability, for its use. It is the user's responsibility to verify the suitability and completeness of such information for each particular use.

Third party materials: Insofar as materials not manufactured or supplied by this manufacturer are used in conjunction with, or instead of this product, it is the responsibility of the customer to obtain, from the manufacturer or supplier, all technical data and other properties relating to these and other materials and to obtain all necessary information relating to them. No liability can be accepted in respect of the use of this product in conjunction with materials from another supplier.

Issue date

05-07-2007

MSDS sections updated

Product and Company Identification: Alternate Trade Names



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name	CLAY CUTTER™
Revision date	04-13-2007
Chemical name	Formation Inhibitor
CAS #	Mixture
Company information	CETCO Drilling Products Group One North Arlington 1500 West Shure Drive Arlington Heights, IL 60004 USA
Emergency	CHEMTREC (800) 424-9300
General information	(800) 527-9948

2. Hazards Identification

Emergency overview	No hazards resulting from the material as supplied. Health injuries are not known or expected under normal use.
OSHA regulatory status	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.
Potential health effects	
Eyes	Contact with eyes may cause irritation.
Skin	May cause skin irritation in susceptible persons.
Inhalation	Health injuries are not known or expected under normal use.
Ingestion	Ingestion of this product may cause nausea, vomiting and diarrhea.

3. Composition / Information on Ingredients

The manufacturer lists no ingredients as hazardous according to OSHA 29 CFR 1910.1200.

Composition comments	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
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4. First Aid Measures

First aid procedures	
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation develops or persists.
Skin contact	Wash off with soap and water. Remove contaminated clothing. Get medical attention if irritation develops or persists.
Inhalation	Remove to fresh air. If the affected person is not breathing, apply artificial respiration. If breathing is difficult, give oxygen. Get medical attention, if needed.
Ingestion	Give victim water or milk. If swallowed, do NOT induce vomiting. Never give anything by mouth to an unconscious person. Obtain medical attention.
General advice	If you feel unwell, seek medical advice (show the label where possible).

5. Fire Fighting Measures

Flammable properties	This material will not burn.
Unusual fire & explosion hazards	Not a fire hazard.
Extinguishing media	
Suitable extinguishing media	Use any media suitable for the surrounding fires.
Fire fighting equipment/instructions	Move containers from fire area if you can do it without risk. Cool containers with flooding quantities of water until well after fire is out.

Protection of firefighters

Protective equipment for firefighters

In the event of fire, wear self-contained breathing apparatus. Cool containers with flooding quantities of water until well after fire is out. Containers can build up pressure if exposed to heat (fire).

6. Accidental Release Measures

Environmental precautions

Prevent spreading over a wide area (e.g. by containment or oil barriers). Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system.

Methods for containment

Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible.

Methods for cleaning up

Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Do not allow the spilled product to enter public drainage system or open water courses. Wear appropriate protective equipment and clothing during clean-up.

7. Handling and Storage

Handling

Use only in well-ventilated areas. Provide sufficient air exchange and/or exhaust in work rooms. In case of insufficient ventilation, wear suitable respiratory equipment.

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Store in original container.

8. Exposure Controls / Personal Protection

Engineering controls

Good general ventilation should be sufficient to control airborne levels. Local exhaust is suggested for use, where possible, in enclosed or confined spaces. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Personal protective equipment

Eye / face protection

Wear safety glasses; chemical goggles (if splashing is possible).

Skin protection

Wear appropriate chemical resistant gloves. Use of an impervious apron is recommended.

Respiratory protection

None required where adequate ventilation conditions exist.

General hygiene considerations

Use good industrial hygiene practices in handling this material. Wash hands before breaks and immediately after handling the product.

9. Physical & Chemical Properties

Color	Not available
Form	Liquid.
Odor threshold	Not available
Physical state	Liquid
pH	6.5 - 8.5
Melting point	Not available
Freezing point	Not available
Boiling point	210 - 215 °F (98.9 - 101.7 °C)
Flash point	Not available
Evaporation rate	Not available
Flammability limits in air, lower, % by volume	Not available
Flammability limits in air, upper, % by volume	Not available
Vapor pressure	Not Determined
Vapor density	Not Determined
Specific gravity	1.01 - 1.03
Relative density	8.42 - 8.59 lb/gal
Solubility (H2O)	100 % Complete
Octanol/H2O coeff	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Percent volatile	50 % v/v

10. Chemical Stability & Reactivity Information

Chemical stability	No hazards to be especially mentioned. Stable at normal conditions.
Conditions to avoid	None known.
Incompatible materials	None known.
Hazardous decomposition products	Upon decomposition, this product may yield gaseous nitrogen oxides, carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.
Hazardous polymerization	Will not occur.

11. Toxicological Information

Component analysis - LD50	This product is judged to have an acute oral LD50 (rat) greater than 5 g/kg of body weight, and an acute dermal LD50 (rabbit) greater than 3.16 g/kg of body weight.
Oral effects	Acute: Rat - LD50: > 500 mg/kg
Further information	This product has no known adverse effect on human health.

12. Ecological Information

Ecotoxicity	This material is not expected to be harmful to aquatic life. This material has a biodegradation percentage of 85.2% and is considered to have ready biodegradability. This material exceeds the OECD Guideline 301B for environmental friendliness
Environmental effects	Ecological injuries are not known or expected under normal use.

13. Disposal Considerations

Disposal instructions	Dispose in accordance with all applicable regulations.
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14. Transport Information

Department of Transportation (DOT) Requirements

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

15. Regulatory Information

US federal regulations	OSHA Process Safety Standard: This material is not known to be hazardous by the OSHA Highly Hazardous Process Safety Standard, 29 CFR 1910.119.
CERCLA (Superfund) reportable quantity	None
Superfund Amendments and Reauthorization Act of 1986 (SARA)	
Hazard categories	Immediate Hazard - No Delayed Hazard - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No
Section 302 extremely hazardous substance	No
Section 311 hazardous chemical	No
WHMIS status	Non-controlled

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (CCS)	No
Europe	European Inventory of New and Existing Chemicals (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Japanese Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Korean Inventory of Chemicals (KICS)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

State regulations

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

16. Other Information**Further information**

This safety datasheet only contains information relating to safety and does not replace any product information or product specification.

HMIS ratings

Health: 1
Flammability: 0
Physical hazard: 0

NFPA ratings

Health: 0
Flammability: 0
Instability: 0

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The manufacturer expressly does not make any representations, warranties, or guarantees as to its accuracy, reliability or completeness nor assumes any liability, for its use. It is the user's responsibility to verify the suitability and completeness of such information for each particular use.

Third party materials: Insofar as materials not manufactured or supplied by this manufacturer are used in conjunction with, or instead of this product, it is the responsibility of the customer to obtain, from the manufacturer or supplier, all technical data and other properties relating to these and other materials and to obtain all necessary information relating to them. No liability can be accepted in respect of the use of this product in conjunction with materials from another supplier.

Issue date

04-13-2007

MSDS sections updated

Product and Company Identification: Alternate Trade Names

Safety Data Sheet

1. IDENTIFICATION

Product Name: Clay Buster

Distributor: Tarheel Contractors Supply, Inc.

162 Porter Road

Rock Hill, SC 29730

Phone: 800-218-0492

Emergency Phone: 803-325-4066

Recommended Use: Drilling Fluid Additive

Restrictions On Use: Use only as recommended

2. HAZARDS IDENTIFICATION

Wear personal protective equipment to prevent contact with eyes. May cause skin, respiratory tract and eye irritation. Remove and wash all contaminated clothing before reuse. Thoroughly wash the affected area with water.

Inhalation: May cause irritation.

Eye Contact: May cause irritation.

Skin Contact: May cause irritation.

Ingestion: No toxicity or other health effects information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Proprietary Organic Salt	57%	CAS Registry#: Proprietary
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Water	43%	CAS Registry#: 7732-18-5
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4. FIRST AID MEASURES:

Inhalation: Remove to fresh air. If breathing has stopped, give artificial respiration.

Consult a physician.

Eye Contact: Immediately flush with water until no evidence of chemical remains (at least

15-20 minutes) and consult a physician.

Skin Contact: Immediately flush with water with sufficient volume until there is no evidence of the chemical on the affected area.

Ingestion: If person is conscious and able to swallow, have them drink a large volume of water and milk and induce vomiting. Contact a physician.

5. FIRE FIGHTING MEASURES:

Flashpoint: Not flammable

Auto-Ignition Temperature: Not known

General Hazard: If exposed to fire, may support combustion.

Fire Fighting Instructions: Avoid contact with eyes and skin. Remain upwind.

Fire Fighting Equipment: Wear S.C.B.A. May use water spray, carbon dioxide, dry chemical or chemical foam to fight fire.

Hazardous Combustion Products: May emit Nitrogen oxides, Hydrochloric acid and Carbon monoxide.

6. ACCIDENTAL RELEASE MEASURES:

Land Spill: Contain spill. Use personal protective equipment to prevent contact with eyes, skin and clothing. Avoid routing to water bodies or streams. Pick up and place in containers for recovery or disposal.

Water Spill: Contain spill. Prevent contact with eyes. Prevent flow to water supplies. Isolate and take up for disposal.

7. HANDLING AND STORAGE:

Storage Temperature: May be stored at ambient temperatures.

Storage Pressure: May be stored at ambient pressures.

General: Do not get into eyes and avoid contact with skin or clothing. Do not breathe mist. Wash all contaminated clothing before reuse. Best if stored in plastic or glass. May slightly corrode some grades of stainless steel. Do not eat or drink while handling. Wash thoroughly after handling.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

Engineering Controls: Provide controls to prevent dusting and to prevent exposure to mists.

Personal Protective Equipment: Mist type respirator if exposed to mists. Rubber gloves. Safety glasses or chemical goggles. Eyewash and safety shower readily available in the immediate area.

9. PHYSICAL AND CHEMICAL PROPERTIES

Vapor Pressure: Not known	Vapor Density(Air=1): Not known
Specific Gravity: Not known	Evap. Rate(n-Butyl Acetate=1): Not known
Solubility in Water: Miscible	Freezing Point: Not known
pH: 5 - 10	Odor: Slight amine
Boiling Point: Not known	Appearance: Colorless to light yellow
Melting Point: N/A	Physical State: Solution
Viscosity: Not known	

10. STABILITY AND REACTIVITY

General: Stable at ambient temperatures. Do not expose to high temperatures.

Incompatible Materials and Conditions to Avoid: Oxidizers should be tested for compatibility before use.

Hazardous Decomposition: In fire conditions: Carbon monoxide, Hydrochloric acid and Nitrogen oxides. If heated to decomposition, amine may be released.

11. TOXICOLOGICAL INFORMATION

Not identified as an OSHA, NTP or IARC carcinogen.

No data available indicating any carcinogenic activity.

12. ECOLOGICAL INFORMATION

This material may be biodegradable in an acclimated biological treatment facility. No specific information available. Acute aquatic toxicity testing has shown this compound to be toxic to the ceriodaphnia dubia (water flea).

13. DISPOSAL CONSIDERATIONS

Would not be considered as a RCRA waste if disposed in the form as shipped from Tarheel Contractors Supply, Inc.

Incinerate or dispose according to all federal, state and local regulations.

Do not discharge directly to surface waters.

14. TRANSPORT INFORMATION

DOT: PROPER SHIPPING NAME: Not DOT regulated

HAZARD CLASS: N/A IDENTIFICATION NUMBER: N/A

ICAO/IATA: PROPER SHIPPING NAME: Not regulated

15. REGULATORY INFORMATION

TSCA (Toxic Substance Control Act): All components in this product are listed on the TSCA Chemical Inventory.

CERCLA (Comprehensive Response Compensation, and Liability Act): Not listed

SARA TITLE III (Superfund Amendments and Reauthorization Act): Not listed

NOTES: All components in this product are listed on the Canadian DSL or NDSL.

16. OTHER INFORMATION

Recommended HMIS Ratings: H-2; F-0, R-0

Created: July 1, 2014



SAFETY DATA SHEET

1. Identification

Product identifier CETCO® X-TORQUE

Other means of identification None.

Recommended use Not available.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name CETCO, an MTI Company

Address
2870 Forbs Avenue
Hoffman Estates, IL 60192
United States

Telephone General Information 800 527-9948

Website <http://www.cetco.com/>

E-mail safetydata@mineralstech.com

Emergency phone number Emergency 1.866.519.4752/1 760 476 3962

Americas 1.866.519.4752 (US, Canada, Mexico) 1 760 476 3962 Access Code 333562

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Not classified.

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Hazard symbol None.

Signal word None.

Hazard statement The mixture does not meet the criteria for classification.

Precautionary statement

Prevention Observe good industrial hygiene practices.

Response Wash hands after handling.

Storage Store away from incompatible materials.

Disposal Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information 100% of the mixture consists of component(s) of unknown acute oral toxicity. 100% of the mixture consists of component(s) of unknown acute dermal toxicity. 100% of the mixture consists of component(s) of unknown acute inhalation toxicity. 100% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 100% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

3. Composition/information on ingredients

Mixtures

The manufacturer lists no ingredients as hazardous according to OSHA 29 CFR 1910.1200.

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact Rinse with water. Get medical attention if irritation develops and persists.

Ingestion Rinse mouth. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed	Direct contact with eyes may cause temporary irritation.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
5. Fire-fighting measures	
Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.
6. Accidental release measures	
Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.
	Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
	Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.
7. Handling and storage	
Precautions for safe handling	Avoid prolonged exposure. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store in original tightly closed container. Keep out of the reach of children. Store away from incompatible materials (see Section 10 of the SDS).
8. Exposure controls/personal protection	
Occupational exposure limits	
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.	
Biological limit values	No biological exposure limits noted for the ingredient(s).
Appropriate engineering controls	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Wear safety glasses with side shields (or goggles).
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves.
Other	Wear appropriate chemical resistant clothing.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties**Appearance**

Physical state Liquid.

Form Liquid.

Color Dark brown.

Odor Oily.

Odor threshold Not available.

pH 7 - 7.2

Melting point/freezing point < 0 °F (< -17.78 °C)

Initial boiling point and boiling range > 572 °F (> 300 °C)

Flash point > 554.0 °F (> 290.0 °C)

Evaporation rate Not available.

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure Not available.

Vapor density Not available.

Relative density Not available.

Solubility(ies)

Solubility (water) SOLUBLE

Partition coefficient (n-octanol/water) Not available.

Auto-ignition temperature Not available.

Decomposition temperature Not available.

Viscosity Not available.

Other information

Explosive properties Not explosive.

Oxidizing properties Not oxidizing.

VOC CARB

10. Stability and reactivity

Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability Material is stable under normal conditions.

Possibility of hazardous reactions No dangerous reaction known under conditions of normal use.

Conditions to avoid Contact with incompatible materials.

Incompatible materials Strong oxidizing agents.

Hazardous decomposition products No hazardous decomposition products are known.

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

Inhalation Prolonged inhalation may be harmful.

Skin contact No adverse effects due to skin contact are expected.

Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics	Direct contact with eyes may cause temporary irritation.
Information on toxicological effects	
Acute toxicity	Not known.
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.
Respiratory or skin sensitization	
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	Not classifiable as to carcinogenicity to humans.
IARC Monographs. Overall Evaluation of Carcinogenicity	
Not listed.	
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)	
Not regulated.	
US. National Toxicology Program (NTP) Report on Carcinogens	
Not listed.	

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
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Product	Species	Test Results
CETCO® X-TORQUE		
Aquatic		
Crustacea	LC50 Daphnia	>= 5000 mg/kg
Persistence and degradability	No data is available on the degradability of any ingredients in the mixture.	
Bioaccumulative potential	No data available.	
Mobility in soil	No data available.	
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.	

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

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

15. Regulatory information

US federal regulations This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

California Proposition 65



WARNING: California Safe Drinking Water and Toxic Enforcement Act of 2016 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to www.P65Warnings.ca.gov.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCs)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Toxic Chemical Substances (TCS)	Yes

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	14-April-2016
Revision date	23-March-2018
Version #	05
HMIS® ratings	Health: 0 Flammability: 0 Physical hazard: 0
NFPA ratings	Health: 0 Flammability: 0 Instability: 0
Disclaimer	The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The manufacturer expressly does not make any representations, warranties, or guarantees as to its accuracy, reliability or completeness nor assumes any liability, for its use. It is the user's responsibility to verify the suitability and completeness of such information for each particular use. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. CETCO, an MTI Company cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.
Revision information	This document has undergone significant changes and should be reviewed in its entirety.



SAFETY DATA SHEET

Issue Date: 06/15/2018

PolyShot™

1. IDENTIFICATION

Product Name: PolyShot™

Recommended use of the chemical and restriction on use

Identified uses: Drilling fluid additive. For professional and industrial use only.

Company Identification

Tarheel Contractors Supply, Inc

162 Porter Road

Rock Hill, SC 29730

United States

Customer Information: 800-218-0492

Emergency Contact: CHEMTREC 800-424-9300 or +1 703-527-3887 **Customer Care Number (CCN):** 711064

2. HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

Classification according to paragraph (d) of 29 CFR 1910.1200:

Not classified

Label Elements

Labelling according to paragraph (f) of 29 CFR 1910. 1200:

Precautionary Statements – None

Other Hhazards

Spills produce extremely slippery surfaces.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula: Proprietary

4. FIRST AID MEASURES

First Aid Measures

Skin

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. In case of persistent skin irritation, consult a physician.

Eyes

Rinse immediately with soap and plenty of water, also under the eyelids, for at least 15 minutes. Alternatively, rinse immediately with Diphoterine ®. Get prompt medical attention.

Ingestion

Rinse mouth with water. Do NOT induce vomiting. Call a physician or poison control center immediately.

Symptoms

None under normal use.

Medical Attention

None reasonably foreseeable

5. FIREFIGHTING MEASURES

Suitable Extinguishing Media

Water. Water spray. Foam. Carbon dioxide (CO₂). Dry powder.

Warning! Spills produce extremely slippery surfaces.

Unsuitable Extinguishing Media

None.

Specific hazards arising from the chemical

Hazardous decomposition products

Carbon oxides (CO_x). Nitrogen oxides (NO_x). Hydrogen cyanide (hydrocyanic acid) may be produced in the event of combustion in an oxygen deficient atmosphere.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus and protective suit.

Other Information

Spills produce extremely slippery surfaces.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures

Personal precautions

Do not touch or walk through spilled material. Spills produce extremely slippery surfaces.

Protective equipment

Wear adequate personal protective equipment (see Section 8 Exposure Controls/Personal Protection).

For emergency responders

Keep people away from spill/leak. Prevent further leakage or spillage if safe to do so.

Environmental Precautions

Do not contaminate water.

Methods and material for containment and cleaning up**Small spills**

Do not flush with water. Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal.

Large spills

Do not flush with water. Dam up. Clean up promptly by scoop or vacuum.

Residues

Soak up with inert absorbent material. After cleaning, flush away traces with water.

7. HANDLING AND STORAGE

Precautions for safe handling**Handling**

Avoid contact with skin and eyes. Renders surfaces extremely slippery when spilled. When using, do not eat, drink or smoke.

Conditions for safe storage, including any incompatibilities**Storage**

Keep away from heat and sources of ignition. Freezing will affect the physical condition and may damage the material. Incompatible with oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters**Occupational exposure limits:**

Component	ACGIH 8-Hour TWA	OSHA PEL 8-Hour TWA	NIOSH IDLH
Distillates (petroleum), hydrotreated light	200 mg/m ³	-	-

Exposure Guidelines**Appropriate engineering controls**

Use local exhaust if misting occurs. Natural ventilation is adequate in absence of mists.

Individual protection measures, such as personal protective equipment**Eye/face Protection**

Safety glasses with side shields.

Skin Protection

Wear coveralls and/or chemical apron and rubber footwear where physical contact can occur.

Hand Protection

Protective gloves. PVC or other plastic disposable gloves.

Respiratory protection

No personal respiratory protective equipment normally required.

General Hygiene Considerations

Handle in accordance with good industrial hygiene and safety practice. Wash hands and face before breaks, at the end of the work day, and immediately after handling the product

Environmental Exposure

Do not allow uncontrolled discharge of product into the environment.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Viscous liquid, Milky.

Odor

Aliphatic.

Physical state

Liquid

Ph

5 – 8 @ 5 g/L

Melting point

No data available

Freezing Point

< -5 °C

Boiling point

100 °C

Flash Point

Does not flash

Evaporation rate

No applicable

Flammability (solid,gas)

Not applicable

Explosive properties

According to experience not expected

Oxidizing Properties

According to experience not expected

Vapor pressure

2.3 kPa @ 20°C

Vapor Density

0.804 g/litre @ 20°C

Relative Density

1.0 – 1.2

Water Solubility

Completely miscible

Partition coefficient

No applicable

Autoignition temperature

No data available

Decomposition temperature

> 150°C

Viscosity

> 20.5 mm²/s @ 40°C

Explosive properties

Not expected to be explosive based on the chemical structure.

Oxidizing properties

Not expected to be oxidizing based on the chemical structure.

Other information

None.

10. STABILITY AND REACTIVITY

Reactivity

Stable under recommended storage conditions.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

None known.

Conditions to Avoid

Protect from frost, heat and sunlight.

Incompatible Materials

Incompatible with oxidizing agents

Hazardous Decomposition Products

Thermal decomposition may produce: nitrogen oxides (NO_x), carbon oxides (CO_x). Hydrogen cyanide (hydrocyanic acid) may be produced in the event of combustion in an oxygen deficient atmosphere.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Product Information – Product as supplied

Acute oral toxicity

LD50/oral/rat >5000 mg/kg, (Estimated)

Acute dermal toxicity

LD50/oral/rat >5000 mg/kg, (Estimated)

Acute inhalation toxicity

The product is not expected to be toxic by inhalation.

Skin Contact

Non-irritating to skin.

Eye Contact

Non-irritating to eyes (OECD 437)

Respiratory/skin sensitization

Not sensitizing.

Mutagenicity

Not mutagenic.

Carcinogenicity

Not carcinogenic.

Reproductive toxicity

Not toxic for reproduction.

STOT Single exposure

No known effects.

STOT Repeated exposure

No known effects.

Aspiration hazard

Due to the viscosity, this product does not present an aspiration hazard

Relevant information on the hazardous components**Distillates (petroleum), hydrotreated light****Acute oral toxicity**

LD50/oral/rat >5000 mg/kg, (OECD 401)

Acute dermal toxicity

LD50/oral/rat >5000 mg/kg, (OECD 402)

Acute inhalation toxicity

LCO/inhalation/4 hours/rat \geq 4951 mg/m³ (OECD 403) (Based on result obtained from tests on analogous products.

Skin Contact

Non-irritating. (OECD 404) Repeated exposure may cause skin dryness or cracking.

Eye Contact

Non-irritating to eyes (OECD 405)

Respiratory/skin sensitization

By analogy with similar products, this product is not expected to be sensitizing. (OECD 406)

Mutagenicity

Not mutagenic. (OECD 471, 473, 474, 476, 478, 479)

Carcinogenicity

Carcinogenicity study in rats (OECD 451): Negative.

Reproductive toxicity

By analogy with similar substances, this substance is not expected to be toxic for reproduction. NOAEL/rat = 300 ppm. (OECD 421)

STOT Single exposure

No known effects.

STOT Repeated exposure

NOAEL/oral/rat/90 days >+3000 mg/kg/day (OECD 408) (Based on results obtained from tests on analogous products.

Aspiration hazard

May be fatal if swallowed and enters airways

Poly (oxy-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branched**Acute oral toxicity**

LD50/oral/rat = 500 – 2000 mg/kg.

Acute dermal toxicity

LD50/dermal/rabbit = 500 – 2000 mg/kg.

Acute inhalation toxicity

No data available.

Skin Contact

Non-irritating. (OECD 404

Eye Contact

Causes serious eye irritation (OECD 405)

Respiratory/skin sensitization

The results of testing on guinea pigs showed this material to be non-sensitizing.

Mutagenicity

Not mutagenic.

Carcinogenicity

Not carcinogenicity.

Reproductive toxicity

Two-General Reproduction Toxicity

(OECD 416)- NOAEL/rat > 250 mg/kg/day

Prenatal Development Toxicity Study (OECD 414)

-NOAEL/Maternal toxicity/rat > 50 mg/kg/day

-NOAEL/Developmental toxicity/rat > 50 mg/kg/day

STOT Single exposure

No known effects.

STOT Repeated exposure

NOAEL/oral/rat/600 = 50 mg/kg/day

Aspiration hazard

No known effects.

12. ECOLOGICAL INFORMATION

Toxicity

Information on the product as supplied

Acute toxicity to fish.

LC50/Oncorhynchus mykiss/96 hours > 100 mg/L. (Estimated)

Acute toxicity to invertebrates

EC50/Daphnia magna/48 hours > 100 mg/L. (Estimated)

Acute toxicity to algae.

IC50/Algae/72 hours > 100 mg/L (Estimated)

Chronic toxicity to fish.

No data available.

Toxicity to micro-organisms.

No data available

Effects on terrestrial organisms.

No data available.

Sediment toxicity.

No data available.

Relevant information on the hazardous components

Distillates (petroleum), hydrotreated light

Acute toxicity to fish.

LC0/Oncorhynchus mykiss/96 hours > 1000 mg/L. (OECD 203)

Acute toxicity to invertebrates

EC0/Daphnia magna/48 hours > 1000 mg/L. (OECD 202)

Acute toxicity to algae.

IC0/Pseudokirchneriella subcapitata/72 hours > 1000 mg/L (OECD 201)

Chronic toxicity to fish.

NOEC/Oncorhynchus mykiss/28 days > 1000 mg/L.

Chronic toxicity to invertebrates

NOEC/Daphnia magna/21 days > 1000 mg/L.

Toxicity to micro-organisms.

EC50/Tetrahymena pyriformis/ 48h > 1000 mg/L.

Effects on terrestrial organisms.

No data available.

Sediment toxicity.

No data available. Readily biodegradable, exposure to sediment is unlikely.

Poly(oxy)-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branched**Acute toxicity to fish.**

LC50/Cyprinus carpio/96 hours = 1 – 10 mg/L (OECD 203)

Acute toxicity to invertebrates

EC50/Daphnia/48 hours = 1 – 10 mg/L (OECD 202)

Acute toxicity to algae.

IC50/Desmodesmus subspicatus /72 hours = 1 – 10 mg/L (OECD 201)

Chronic toxicity to fish.

No data available.

Chronic toxicity to invertebrates

No data available.

Toxicity to micro-organisms.

EC10/activated sludge/17 hours > 10000 mg/L (DIN 38412-8)

Effects on terrestrial organisms.

No data available.

Sediment toxicity.

No data available.

Persistence and degradability**Degradation**

Not readily biodegradable.

Hydrolysis

Does not hydrolyse.

Photolysis

Not data available.

Distillates (petroleum), hydrotreated light**Degradation**

Readily biodegradable. 67.6% / 28 days (OECD 301 F); 68.8% / 28 day (OECD 306); 61.2%/61days (OECD 304 A)

Hydrolysis

Does not hydrolyse.

Photolysis

No data available.

Poly(oxy-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branched

Degradation

Readily biodegradable, >60% / 28 days(OECD 301B)

Hydrolysis

Does not hydrolyse.

Photolysis

No data available.

Bioaccumulative potential

Information on the product as supplied

The product is not expected to bioaccumulate.

Partition co-efficient (Log Pow)

Not applicable.

Bioconcentration factor (BCF)

No data available.

Relevant information on the hazardous components

Distillates (petroleum), hydrotreated light

Partition co-efficient (Log Pow) 3-6

Bioconcentration factor (BCF)

No data available.

Poly(oxy-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branched

Partition co-efficient (Log Pow) >3

Bioconcentration factor (BCF)

No data available.

Mobility in Soil

Information on the product as supplied

No data available

Relevant information on the hazardous components

Distillates (petroleum), hydrotreated light

KOC

No data available

Poly(oxy-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branched

KOC

> 5000

Other adverse effects

None.

13. DISPOSAL CONSIDERATIONS

Waste treatment methodWaste from residues/unused products

Dispose of in accordance with local and national regulations.

Contaminated Packaging

Rinse empty containers with water and use the rinse-water to prepare the working solution. If recycling is not practicable, dispose of in compliance with local regulations. Can be landfilled or incinerated, when in compliance with local regulations.

Recycling

In accordance with local and national regulations.

14. TRANSPORT INFORMATION

DOT

Not classified.

IMDG/IMO

Not classified.

IATA (Air Transport)

Not classified.

15. REGULATORY INFORMATION

TSCA

All components of this product are listed on the TSCA Chemical Inventory or exempt from listing.

US SARA Reporting Requirements**SARA (Section 311/312) hazard class**

Not concerned

SARA Section 302 (TPQ) Reportable Quantity

Not concerned.

SARA Section 304 Reportable Quantity

Not concerned.

International Inventories TSCA

SARA 313

Not concerned

Clean Water Act

Section 311 Hazardous Substances (40 CFR 117.3) – Reportable Quantity

Not concerned.

Section 112(r) Accidental release prevention requirements (40 CFR 68) Reportable Quantity

Not concerned.

CERCLA

Hazardous Substances List (40 CFR 302.4) Reportable Quantity

Not concerned.

RCRA status

Not RCRA hazardous.

California Proposition 65 Information

WARNING! This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm, Acrylamide

16. OTHER INFORMATION

Recommended NFPA

Health 0

Flammability 1

Instability 0

Physical Hazard –

Recommended HMIS

Health 0

Flammability 1

Physical hazards 0

Personal Protection B

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. In case of any questions, please refer to the official document in English and contact us in your region.

End of Safety Data Sheet