MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name	SHORE PAC®
Version #	10
Revision date	12-December-2008
Chemical name	Copolymer of Sodium Acrylate and Acrylamide
Chemical description	Powder
CAS #	Mixture
Manufacturer	CETCO Construction Drilling Products 2870 Forbs Avenue Hoffman Estates, IL 60192 US safetydata@amcol.com http://www.constructiondrilling.com/ General Information (800) 527-9948 CHEMTREC® (800) 424-9300

2. Hazards Identification

Emergency overview	Health injuries are not known or expected under normal use. No hazards resulting from the material as supplied.
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	This product may cause irritation to the skin.
Inhalation	Inhalation of dusts may cause respiratory irritation.
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.

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. Launder contaminated clothing before reuse. 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. 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

Extinguishing media	
Suitable extinguishing media	Small Fires: Dry chemical, CO2, water spray or regular foam. Large Fires: Water spray, fog or regular foam.

6. Accidental Release Measures

Environmental precautions	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Sweep up or gather material and place in appropriate container for disposal. Avoid dust formation. Small Dry Spills: With clean shovel place material into clean, dry container and cover loosely; move containers from spill area.

7. Handling and Storage

Handling	Handle and open container with care. Minimize dust generation and accumulation.
Storage	Keep the container tightly closed and dry.

8. Exposure Controls / Personal Protection

Personal protective equipment

Eye / face protection	Avoid contact with eyes. Wear dust goggles.
Skin protection	Not normally needed. Wear suitable protective clothing.
Respiratory protection	No personal respiratory protective equipment normally required. Use a particulate filter respirator for particulate concentrations exceeding the Occupational Exposure Limit.

9. Physical & Chemical Properties

Appearance	Free flowing wettable powder.
Color	White.
Odor	Not available.
Odor threshold	Not available.
Physical state	Solid.
Form	Solid. Powder.
pH	Not available.
Melting point	Not available.
Freezing point	Not available.
Boiling point	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability	Not available.
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Specific gravity	0.8 - 1
Relative density	Not available.
Solubility (water)	Solubility limited by viscosity
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.
Incompatible materials	Strong 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.
Possibility of hazardous reactions	Will not occur.

11. Toxicological Information

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.

Environmental effects Ecological injuries are not known or expected under normal use.

Persistence and degradability Not available.

13. Disposal Considerations

Disposal instructions Dispose in accordance with all applicable regulations.

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 This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazarc Communication Standard, 29 CFR 1910.1200.
CERCLA/SARA Hazardous Substances - Not applicable.

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

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)	No
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	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

HMIS ratings

NFPA ratings

Health: 0
Flammability: 0
Instability: 0

Disclaimer

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

12-December-2008

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name XX-POLY

Version # 02

Revision date 12-December-2008

Chemical description Copolymer of sodium acrylate and acrylamide in mineral oil

CAS # Mixture

Manufacturer

CETCO
Construction Drilling Products
2870 Forbs Avenue
Hoffman Estates, IL 60192 US
safetydata@amcol.com
http://www.constructiondrilling.com/
General Information (800) 527-9948
CHEMTREC® (800) 424-9300

2. Hazards Identification

Emergency overview Material can be slippery when wet

Potential health effects

Eyes Contact with eyes may cause 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 Exposure to oil mist/fume/vapor may cause respiratory tract irritation.

Ingestion May be harmful if swallowed. Aspiration into lungs may cause chemical pneumonia and lung damage.

Health effects of additional components

2-PROPENOIC ACID, SODIUM SALT, POLYMER WITH 2-PROPENAMIDE

Emergency overview: Harmful by inhalation, in contact with skin and if swallowed. Highly flammable.

Potential health effects - Routes of exposure: Inhalation. Skin contact. Ingestion.

Potential health effects - Eyes: Harmful in contact with eyes.

Potential health effects - Skin: Harmful in contact with skin.

Potential health effects - Inhalation: Harmful if inhaled.

Potential health effects - Ingestion: Harmful if swallowed.

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. 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 If swallowed, do NOT induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Get medical attention immediately.

5. Fire Fighting Measures

Flammable properties None known.

Extinguishing media

Suitable extinguishing media Dry chemical, CO2, 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. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. 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. Forms smooth, slippery surfaces on floors, posing an accident risk.

7. Handling and Storage

Handling Do not get this material in your eyes, on your skin, or on your clothing. Forms smooth, slippery surfaces on floors, posing an accident risk.

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Store at room temperature in the original container.

8. Exposure Controls / Personal Protection

Occupational exposure limits

ACGIH

Constituents	Type	Value	Form
Acrylamide (79-06-1)	TWA	0.03 mg/m3	Inhalable fraction and vapor.

U.S. - OSHA

Constituents	Type	Value
Acrylamide (79-06-1)	PEL	0.3 mg/m3
	TWA	0.03 mg/m3

Engineering controls Ensure adequate ventilation, especially in confined areas.

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. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

General hygeine considerations Use good industrial hygiene practices in handling this material. Wash hands before breaks and immediately after handling the product. Keep away from food, drink and animal feeding stuffs. Eye wash fountain and emergency showers are recommended.

9. Physical & Chemical Properties

Appearance Viscous.

Color White.

Odor Petroleum

Odor threshold Not available.

Physical state Liquid.

Form Liquid.

pH	7.5
Melting point	Not available.
Freezing point	Not available.
Boiling point	> 212 °F (> 100 °C)
Flash point	> 200 °F (> 93.3 °C) Pensky-Martens Closed Cup
Evaporation rate	Not available.
Flammability	Not available.
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Specific gravity	1.1
Relative density	Not available.
Solubility (water)	Limited by viscosity
Partition coefficient (n-octanol/water)	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	Extremes of temperature and direct sunlight. Do not freeze.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	At thermal decomposition temperatures, carbon monoxide and carbon dioxide.
Possibility of hazardous reactions	Will not occur.

11. Toxicological Information

Toxicological data

Product	Test Results
XX-POLY (Mixture)	Acute Dermal LD50 Rabbit: 5467 mg/kg Acute Inhalation LC50 Rat: 6.2286 mg/l/4h

* Estimates for product may be based on additional component data not shown.

Sensitization

US ACGIH Threshold Limit Values: Skin designation

Acrylamide (79-06-1)	Can be absorbed through the skin.

Acute effects	Acute LD50: 5467 mg/kg, Rabbit, Dermal Acute LC50: 6.23 mg/l/4h, Rat, Inhalation
Carcinogenicity	Suspect cancer hazard. This product contains trace levels (<0.1%) of a potential carcinogen.

IARC Monographs on Occupational Exposures to Chemical Agents: Overall evaluation

Acrylamide (79-06-1)	2A Probable carcinogen.

US ACGIH Threshold Limit Values: A3 carcinogen

Acrylamide (79-06-1)	Group A3 Confirmed animal carcinogen with unknown relevance to humans.

US NTP Report on Carcinogens: Anticipated carcinogen

Acrylamide (79-06-1)	Anticipated carcinogen.

12. Ecological Information

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

Waste codes

US RCRA Hazardous Waste U List: Reference

Acrylamide (79-06-1)	U007

Disposal instructions Dispose in accordance with all applicable regulations.

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.

US EPCRA (SARA Title III) Section 302 - Extremely Hazardous Spill: Reportable quantity

Acrylamide (79-06-1)	5000 LBS

US EPCRA (SARA Title III) Section 302 - Extremely Hazardous Substance: Threshold planning quantity, lower value

Acrylamide (79-06-1)	1000 LBS

US EPCRA (SARA Title III) Section 302 - Extremely Hazardous Substance: Threshold planning quantity, upper value

Acrylamide (79-06-1)	10000 LBS

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: De minimis concentration

Acrylamide (79-06-1)	0.1 %

CERCLA (Superfund) reportable quantity

None

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

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)	Yes
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)	No
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.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Acrylamide (79-06-1)	Listed.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

Acrylamide (79-06-1)	Listed: January 1, 1990 Carcinogenic.

US - New Jersey Community RTK (EHS Survey): Reportable threshold

Acrylamide (79-06-1)	500 LBS

US - Pennsylvania RTK - Hazardous Substances: Listed substance

Acrylamide (79-06-1)	Listed.

16. Other Information

HMIS ratings

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 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 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. 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.

Issue date 12-December-2008

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

Other information CETCO is an AMCOL International company.

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name INSTA-CLEAR™ DRY

Version # 08

Revision date 12-December-2008

Chemical description Dry Blend of Clay, Inorganic Salt, and Organic Polymer

CAS # Mixture

Manufacturer

CETCO
Construction Drilling Products
2870 Forbs Avenue
Hoffman Estates, IL 60192 US
safetydata@amcol.com
http://www.constructiondrilling.com/
General Information (800) 527-9948
CHEMTREC® (800) 424-9300

2. Hazards Identification

Emergency overview This product has the potential for generation of respirable dust during handling and use. Dust may contain respirable crystalline silica.

Potential health effects

Eyes Contact with eyes may cause irritation.

Skin Prolonged and/or repeated skin contact may result in mild irritation or redness.

Inhalation Repeated or prolonged inhalation may cause toxic effects. For additional information on inhalation hazards, see Section 11 of this safety data sheet.

Ingestion Health injuries are not known or expected under normal use. Ingestion of large amounts may produce gastrointestinal disturbances including irritation, nausea, and diarrhea.

Target organs Lungs.

Chronic effects Overexposure to dust may result in pneumocononiosis, 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 3%. Occupational Exposure Limits for impurities are listed in Section 8.

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. 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. If not breathing, give artificial respiration or give oxygen by trained personnel.

Ingestion Have victim rinse mouth thoroughly with water. If ingestion of a large amount does occur, seek medical attention.

5. Fire Fighting Measures

Flammable properties This material will not burn.

Extinguishing media

Suitable extinguishing media Dry chemical, CO2, water spray or regular foam.

6. Accidental Release Measures

Environmental precautions No special environmental precautions required. Do not let product enter drains.

Methods for containment Stop leak if you can do so without risk.

Methods for cleaning up Large spills may be neutralized with dilute alkaline solutions of soda ash, or lime. 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 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 No special storage conditions required. No special restrictions on storage with other products.

8. Exposure Controls / Personal Protection

Occupational exposure limits

ACGIH

Impurities	Type	Value	Form
INERT OR NUISANCE DUST (SEQ250)	TWA	3 mg/m3	Respirable particles.
		10 mg/m3	Inhalable particles.
QUARTZ (14808-60-7)	TWA	0.025 mg/m3	Respirable fraction.

U.S. - OSHA

Impurities	Type	Value	Form
INERT OR NUISANCE DUST (SEQ250)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
	TWA	50 mppcf	Total dust.
		15 mg/m3	Total dust.
		15 mppcf	Respirable fraction.
		5 mg/m3	Respirable fraction.
QUARTZ (14808-60-7)	TWA	0.1 mg/m3	Respirable dust.
		0.3 mg/m3	Total dust.
		2.4 mppcf	Respirable.
		0.1 mg/m3	Respirable.

Exposure guidelines Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled.

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. Eye wash fountain is recommended.

Skin protection Use of protective coveralls and long sleeves is recommended. Remove and wash contaminated clothing before re-use.

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

General hygeine considerations Handle in accordance with good industrial hygiene and safety practice.

9. Physical & Chemical Properties

Appearance Not available.

Color Tan.

Odor None.

Odor threshold Not available.

Physical state	Solid.
Form	Powder.
pH	3.5
Melting point	Not available.
Freezing point	Not available.
Boiling point	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability	Not available.
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Specific gravity	1.3261 g/ml estimated
Relative density	Not available.
Solubility (water)	100 %
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

Acute effects Skin irritation Eye irritation

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

IARC Monographs on Occupational Exposures to Chemical Agents: Overall evaluation

QUARTZ (14808-60-7) 1 Human carcinogen.

US ACGIH Threshold Limit Values: A2 carcinogen

QUARTZ (14808-60-7) Group A2 Suspected human carcinogen.

US NTP Report on Carcinogens: Known carcinogen

QUARTZ (14808-60-7) Known carcinogen.

12. Ecological Information

Ecotoxicological data

Product	Test Results
SHORE PAC® INSTA-CLEAR™ DRY (Mixture)	LC50 Fish: 36538 mg/l 96.00 Hours estimated

* Estimates for product may be based on additional component data not shown.

Ecotoxicity This material is not expected to be harmful to aquatic life. Components of this product have beer identified as having potential environmental concerns.

Environmental effects Ecological injuries are not known or expected under normal use.

Persistence and degradability Not available.

13. Disposal Considerations

Disposal instructions Dispose in accordance with all applicable regulations.

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)	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 New and Existing Chemicals (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes

Country(s) or region	Inventory name	On inventory (yes/no)*
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)

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

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

QUARTZ (14808-60-7) Listed.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

QUARTZ (14808-60-7) Listed: October 1, 1988 Carcinogenic.

US - Pennsylvania RTK - Hazardous Substances: Listed substance

QUARTZ (14808-60-7) Listed.

16. Other Information

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

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.

HMIS ratings

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 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 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. 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.

Issue date 12-December-2008

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

Other information CETCO is an AMCOL International company.

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name SURE SEAL

Version # 12

Revision date 12-December-2008

Chemical description Sodium Polyacrylate, lightly crosslinked

CAS # Mixture

Manufacturer

CETCO
Construction Drilling Products
2870 Forbs Avenue
Hoffman Estates, IL 60192 US
safetydata@amcol.com
http://www.constructiondrilling.com/
General Information (800) 527-9948
CHEMTREC® (800) 424-9300

2. Hazards Identification

Emergency overview 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 Substance may cause slight skin irritation.

Inhalation Inhalation of dusts may cause respiratory irritation.

Ingestion May be harmful if swallowed.

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.

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 off with soap and 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. Call a physician or Poison Control Center immediately.

5. Fire Fighting Measures

Flammable properties Dusts at sufficient concentrations can form explosive mixtures with air.

Extinguishing media

Suitable extinguishing media Dry chemical, CO2, water spray or regular foam. Use extinguishing agent suitable for type of surrounding fire.

Protection of firefighters

Protective equipment and precautions for firefighters Material can be slippery when wet

Hazardous combustion products None known.

6. Accidental Release Measures

Environmental precautions No special environmental precautions required.

Methods for containment	Stop leak if you can do so without risk.
Methods for cleaning up	Avoid dust formation. Use a suitable vacuum cleaner. Material can be slippery when wet

7. Handling and Storage

Handling	Handle and open container with care. Wash hands before eating. Material can be slippery when wet Keep formation of airborne dusts to a minimum.
Storage	Store in a cool dry place.

8. Exposure Controls / Personal Protection

Personal protective equipment

Eye / face protection	Wear chemical goggles.
Skin protection	Not normally needed. Wear suitable protective clothing.
Respiratory protection	Use a particulate filter respirator for particulate concentrations exceeding the Occupational Exposure Limit.

9. Physical & Chemical Properties

Appearance	Not available.
Color	Off-white.
Odor	None.
Odor threshold	Not available.
Physical state	Solid.
Form	Powder. or Granular.
pH	Not available.
Melting point	Not available.
Freezing point	Not available.
Boiling point	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability	Not available.
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Specific gravity	Not available.
Relative density	Not available.
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
VOC	0 % estimated
Bulk density	0.5 - 0.7 g/l
Percent volatile	0 % estimated

10. Chemical Stability & Reactivity Information

Chemical stability	Stable at normal conditions.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.
Possibility of hazardous reactions	Will not occur.

11. Toxicological Information

Chronic effects Prolonged or repeated exposure may cause lung injury.

Further information Information given is based on data obtained from similar substances.

12. Ecological Information

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

Environmental effects Ecological injuries are not known or expected under normal use.

Persistence and degradability Not available.

13. Disposal Considerations

Disposal instructions Dispose in accordance with all applicable regulations.

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)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
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)	No
Korea	Existing Chemicals List (ECL)	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	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

HMIS ratings

NFPA ratings

Health: 0
Flammability: 0
Instability: 0

Disclaimer

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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. 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.

Issue date

12-December-2008

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

Other Information: Other information

Other information

CETCO is an AMCOL International company.

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name SAND SEALANT™

Version # 09

Revision date 19-December-2008

Synonym(s) SMECTITE CLAY

Manufacturer

CETCO
Construction Drilling Products
2870 Forbs Avenue
Hoffman Estates, IL 60192 US
safetydata@amcol.com
http://www.constructiondrilling.com/
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. Eye contact.

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 pneumocononiosis, 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 Bentonite contains naturally occurring crystalline silica (not listed in Annex I of Directive 67/548/EEC) in quantities less than 6%. Occupational Exposure Limits for impurities are listed in Section 8.

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, CO2, water spray or regular foam.

Protection of firefighters

Protective equipment and precautions for firefighters Material can be slippery when wet

Hazardous combustion products None known.

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

Impurities	Type	Value	Form
INERT OR NUISANCE DUST (SEQ250)	TWA	10 mg/m3	Inhalable particles.
		3 mg/m3	Respirable particles.
QUARTZ (14808-60-7)	TWA	0.025 mg/m3	Respirable fraction.

U.S. - OSHA

Impurities	Type	Value	Form
INERT OR NUISANCE DUST (SEQ250)	PEL	15 mg/m3	Total dust.
		5 mg/m3	Respirable fraction.
	TWA	5 mg/m3	Respirable fraction.
		50 mppcf	Total dust.
		15 mppcf	Respirable fraction.
		15 mg/m3	Total dust.
QUARTZ (14808-60-7)	TWA	2.4 mppcf	Respirable.
		0.3 mg/m3	Total dust.
		0.1 mg/m3	Respirable.
		0.1 mg/m3	Respirable dust.

Exposure guidelines Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled.

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 hygeine 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	Not available.
Melting point	Not available.
Freezing point	Not available.
Boiling point	Not available.
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	Not available.
Relative density	Not available.
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
Molecular formula	UNKNOWN

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

Acute effects	Mild irritant to eyes (according to the modified Kay & Calandra criteria).

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.

12. Ecological Information

Ecotoxicological data

Product	Test Results
C/S GRANULAR™	LC50 Fish: 19000 mg/l 96.00 Hours estimated

* Estimates for product may be based on additional component data not shown.

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.

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)	Yes

Country(s) or region	Inventory name	On inventory (yes/no)*
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 New and Existing Chemicals (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
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.

16. Other Information

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

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.

HMIS ratings

NFPA ratings Health: 1
Flammability: 0
Instability: 0

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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. 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.

Issue date 19-December-2008

Other information CETCO is an AMCOL International company.

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name STONE STOP™

Version # 09

Revision date 19-December-2008

Synonym(s) SMECTITE CLAY

Manufacturer

CETCO
Construction Drilling Products
2870 Forbs Avenue
Hoffman Estates, IL 60192 US
safetydata@amcol.com
http://www.constructiondrilling.com/
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. Eye contact.

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 pneumocononiosis, 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 Bentonite contains naturally occurring crystalline silica (not listed in Annex I of Directive 67/548/EEC) in quantities less than 6%. Occupational Exposure Limits for impurities are listed in Section 8.

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, CO2, water spray or regular foam.

Protection of firefighters

Protective equipment and precautions for firefighters Material can be slippery when wet

Hazardous combustion products None known.

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

Impurities	Type	Value	Form
INERT OR NUISANCE DUST (SEQ250)	TWA	10 mg/m3	Inhalable particles.
		3 mg/m3	Respirable particles.
QUARTZ (14808-60-7)	TWA	0.025 mg/m3	Respirable fraction.

U.S. - OSHA

Impurities	Type	Value	Form
INERT OR NUISANCE DUST (SEQ250)	PEL	15 mg/m3	Total dust.
		5 mg/m3	Respirable fraction.
	TWA	5 mg/m3	Respirable fraction.
		50 mppcf	Total dust.
		15 mppcf	Respirable fraction.
		15 mg/m3	Total dust.
QUARTZ (14808-60-7)	TWA	2.4 mppcf	Respirable.
		0.3 mg/m3	Total dust.
		0.1 mg/m3	Respirable.
		0.1 mg/m3	Respirable dust.

Exposure guidelines Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled.

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 hygeine 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	Not available.
Melting point	Not available.
Freezing point	Not available.
Boiling point	Not available.
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	Not available.
Relative density	Not available.
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
Molecular formula	UNKNOWN

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

Acute effects	Mild irritant to eyes (according to the modified Kay & Calandra criteria).

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.

12. Ecological Information

Ecotoxicological data

Product	Test Results
C/S GRANULAR™	LC50 Fish: 19000 mg/l 96.00 Hours estimated

* Estimates for product may be based on additional component data not shown.

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.

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)	Yes

Country(s) or region	Inventory name	On inventory (yes/no)*
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 New and Existing Chemicals (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
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.

16. Other Information

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

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.

HMIS ratings

NFPA ratings Health: 1
Flammability: 0
Instability: 0

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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. 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.

Issue date 19-December-2008

Other information CETCO is an AMCOL International company.

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name SLURRY BUSTER™

Version # 16

Revision date 12-December-2008

Chemical description Sodium Hypochlorite Solution

CAS # Mixture

Manufacturer

CETCO
Construction Drilling Products
2870 Forbs Avenue
Hoffman Estates, IL 60192 US
safetydata@amcol.com
http://www.constructiondrilling.com/
General Information (800) 527-9948
CHEMTREC® (800) 424-9300

2. Hazards Identification

Emergency overview CORROSIVE

Potential health effects

Eyes Avoid contact with eyes. Contact will irritate or burn eyes. Symptoms include itching, burning, redness and tearing. Dust or powder may irritate eye tissue, Symptoms include itching, burning, redness and tearing.

Skin Substance is corrosive. Contact causes severe skin irritation and possible burns. This product may cause irritation to the skin, Prolonged or repeated skin contact may result in redness, burning sensation or dermatitis.

Inhalation High vapor concentrations are irritating to the eyes, nose, throat, and lungs. Prolonged inhalation may be harmful. Intentional misuse by concentrating and inhaling the product can be harmful or fatal. Inhalation of dusts may cause respiratory irritation. For additional information on inhalation hazards, see Section 11 of this safety data sheet.

Ingestion Corrosive and may cause severe and permanent damage to mouth, throat, and stomach. Ingestion of large amounts may produce gastrointestinal disturbances including irritation, nausea, and diarrhea.

3. Composition / Information on Ingredients

Components	CAS #	Percent
SODIUM HYPOCHLORITE	7681-52-9	10 - 20
SODIUM HYDROXIDE	1310-73-2	0.1 - 1
Non-hazardous and other components below reportable levels		80 - 90

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

4. First Aid Measures

First aid procedures

Eye contact Immediately flush eyes with plenty of water for at least 20 minutes. Get medical attention immediately.

Skin contact Wash off with soap and water. Wash off immediately with plenty of water for at least 15 minutes. Remove and isolate contaminated clothing and shoes. Launder contaminated clothing before reuse. Get medical attention if irritation develops or persists.

Inhalation Move 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 If swallowed, do NOT induce vomiting. Have victim rinse mouth thoroughly with water. Drink 1 or 2 glasses of water. Never give anything by mouth to a victim who is unconscious or is having convulsions. Get medical attention immediately.

5. Fire Fighting Measures

Flammable properties Containers may explode when heated. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Extinguishing media

Suitable extinguishing media Dry chemical, CO2, water spray or regular foam. Use any media suitable for the surrounding fires.

Protection of firefighters

Protective equipment and precautions for firefighters Move containers from fire area if you can do it without risk. Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.

Hazardous combustion products Fire may produce irritating, corrosive and/or toxic gases.

6. Accidental Release Measures

Personal precautions Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Do not touch or walk through spilled material. Avoid skin contact and inhalation of vapors during disposal of spills.

Environmental precautions Do not contaminate water. Runoff from fire control or dilution water may cause pollution. Prevent further leakage or spillage if safe to do so.

Methods for containment Dike the spilled material, where this is possible. Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas.

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. Keep in suitable, closed containers for disposal.

7. Handling and Storage

Handling Handle and open container with care. Do not get this material in your eyes, on your skin, or on your clothing. Do not breathe gas/fumes/vapor/spray. Keep away from heat and flame. "Empty" containers retain product residue (liquid or vapor) and can be dangerous.

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Do not store in direct sunlight. Keep away from heat and sources of ignition. Do not store near acids. Vent container carefully, as needed to relieve pressure.

8. Exposure Controls / Personal Protection

Occupational exposure limits

ACGIH

Components	Type	Value
SODIUM HYDROXIDE (1310-73-2)	TWA	2 mg/m3

U.S. - OSHA

Components	Type	Value
SODIUM HYDROXIDE (1310-73-2)	Ceiling	2 mg/m3
	PEL	2 mg/m3

Personal protective equipment

Eye / face protection Wear chemical goggles and face shield.

Skin protection The use of neoprene gloves is recommended. Use of an impervious apron is recommended Normal work clothing (long sleeved shirts and long pants) is recommended.

Respiratory protection If ventilation is not sufficient to effectively prevent buildup of aerosols or vapors, appropriate NIOSH/MSHA respiratory protection must be provided.

General hygeine considerations Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and immediately after handling the product. Keep away from food, drink and animal feeding stuffs. When using, do not eat, drink or smoke.

Eye wash fountain and emergency showers are recommended. Launder contaminated clothing before reuse.

9. Physical & Chemical Properties

Appearance	Liquid.
Color	Yellow.
Odor	Chlorine.
Odor threshold	Not available.
Physical state	Liquid.
Form	Liquid.
pH	10 - 12
Melting point	Not available.
Freezing point	Not available.
Boiling point	Decomposes
Flash point	Not flammable
Evaporation rate	Same as Water
Flammability	Not available.
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Vapor pressure	0.1 hPa estimated
Vapor density	Same as Water
Specific gravity	1.16
Relative density	Not available.
Solubility (water)	Completely Soluble
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Bulk density	10.2 lb/gal

10. Chemical Stability & Reactivity Information

Chemical stability	Stable, however, may decompose if heated.
Conditions to avoid	High temperatures. Reacts violently with acids.
Incompatible materials	This product reacts with acids. This product may react with strong reducing agents. Contact with metals may evolve flammable hydrogen gas.
Hazardous decomposition products	Thermal decomposition can lead to release of irritating gases and vapors. May develop chlorine if mixed with acidic solutions.
Possibility of hazardous reactions	Will not occur.

11. Toxicological Information

Toxicological data

Product	**Test Results**
SLURRY BUSTER™ (Mixture)	Acute Dermal LD50 Rabbit: 50550 mg/kg
	Acute Oral LD50 Mouse: 46869 mg/kg estimated
Components	**Test Results**
SODIUM HYDROXIDE (1310-73-2)	Acute Dermal LD50 Rabbit: 1350 mg/kg
SODIUM HYPOCHLORITE (7681-52-9)	Acute Dermal LD50 Rabbit: 10000.0001 mg/kg
	Acute Oral LD50 Mouse: 5800 mg/kg
	Acute Oral LD50 Rat: 8200 mg/kg

* Estimates for product may be based on additional component data not shown.

12. Ecological Information

Ecotoxicological data

Product	Test Results
SLURRY BUSTER™ (Mixture)	EC50 Daphnia: 4086 mg/l 48.00 Hours estimated
	LC50 Fish: 13.7 mg/l 96.00 Hours estimated
Components	**Test Results**
SODIUM HYDROXIDE (1310-73-2)	EC50 Water flea (Ceriodaphnia dubia): 34.59 - 47.13 mg/l 48.00 Hours
	LC50 Fish: 45.4 mg/L 96.00 Hours
SODIUM HYPOCHLORITE (7681-52-9)	LC50 Fish: 0.42 mg/L 96.00 Hours
	LC50 Pink salmon (Oncorhynchus gorbuscha): 0.023 - 0.052 mg/l 96.00 Hours

* Estimates for product may be based on additional component data not shown.

Ecotoxicity Components of this product are hazardous to aquatic life. In high concentrations, this product may be dangerous to aquatic life and fouling to shorelines.

Persistence and degradability Not available.

13. Disposal Considerations

Disposal instructions Dispose in accordance with all applicable regulations. Do not allow this material to drain into sewers/water supplies.

14. Transport Information

DOT

Basic shipping requirements:

UN number UN1791
Proper shipping name Hypochlorite solutions
Hazard class 8
Packing group III
Additional information:
Special provisions IB3, N34, T4, TP2, TP24
Packaging exceptions 154
Packaging non bulk 203
Packaging bulk 241
ERG number 154

DOT

IATA

Basic shipping requirements:

Proper shipping name Hypochlorite solutions
Hazard class 8
UN number UN1791
Packing group III
Additional information:
Packaging exceptions 154
Packaging non bulk 203
Packaging bulk 241
Labels required 8

IATA

IMDG

Basic shipping requirements:

Proper shipping name	Hypochlorite solutions
Hazard class	8
UN number	UN1791
Packing group	III
Additional information:	
Packaging exceptions	154
Labels required	8

IMDG

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

SODIUM HYPOCHLORITE: 100.0000
SODIUM HYDROXIDE: 1000.0000

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - Yes 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)	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 New and Existing Chemicals (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

Country(s) or region	Inventory name	On inventory (yes/no)*
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)

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

US - Pennsylvania RTK - Hazardous Substances: Listed substance

SODIUM HYDROXIDE (1310-73-2)	Listed.
SODIUM HYPOCHLORITE (7681-52-9)	Listed.

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

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 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 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. 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.

Issue date 12-December-2008

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

Other information CETCO is an AMCOL International company.

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name DE-CHLOR™

Version # 09

Revision date 12-December-2008

CAS # Mixture

Manufacturer

CETCO
Construction Drilling Products
2870 Forbs Avenue
Hoffman Estates, IL 60192 US
safetydata@amcol.com
http://www.constructiondrilling.com/
General Information (800) 527-9948
CHEMTREC® (800) 424-9300

2. Hazards Identification

Potential health effects

Eyes Dust or powder may irritate eye tissue. Symptoms include itching, burning, redness and tearing.

Skin Not expected to be a primary skin irritant. Prolonged or excessive skin contact with this product may cause mild skin irritation.

Inhalation Dusts of this product may cause irritation of the nose, throat, and respiratory tract.

Ingestion Small amounts (a tablespoonful) swallowed during normal handling operations are not likely to cause injury; swallowing amounts larger than that may cause injury.

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.

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 Wash off with soap and water. Get medical attention if irritation develops or persists. Launder contaminated clothing before reuse.

Inhalation Remove to fresh air. If the affected person is not breathing, apply artificial respiration. If breathing is difficult, give oxygen. If symptoms persist, get medical attention.

Ingestion Give several glasses of water. Induce vomiting, but only if victim is fully conscious. Get medical attention immediately.

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 None known.

Extinguishing media

Suitable extinguishing media Use any media suitable for the surrounding fires. Dry chemical, CO2, water spray or regular foam.

Hazardous combustion products Carbon monoxide, carbon dioxide and other hydrocarbon fragments.

6. Accidental Release Measures

Environmental precautions No special environmental precautions required.

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. Reduce airborne dust and prevent scattering by moistening with water. Wear appropriate protective equipment and clothing during clean-up.

7. Handling and Storage

Handling Keep formation of airborne dusts to a minimum. Use this product with adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not get this material in contact with skin or eyes. Potential for exothermic hazard.

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Store away from strong oxidizers.

8. Exposure Controls / Personal Protection

Occupational exposure limits

ACGIH

Constituents	Type	Value	Form
INERT OR NUISANCE DUST (SEQ250)	TWA	3 mg/m3	Respirable particles.
		10 mg/m3	Inhalable particles.

U.S. - OSHA

Constituents	Type	Value	Form
INERT OR NUISANCE DUST (SEQ250)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
	TWA	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
		50 mppcf	Total dust.
		15 mppcf	Respirable fraction.

Engineering controls Good general ventilation should be sufficient to control airborne levels. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below 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.

Skin protection Normal work clothing (long sleeved shirts and long pants) is recommended. Wear appropriate chemical resistant gloves.

Respiratory protection None required where adequate ventilation conditions exist. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

General hygeine 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 Granular.

Color White.

Odor None.

Odor threshold Not available.

Physical state Solid.

Form Not available.

pH Not available.

Melting point 118.4 °F (48 °C)

Freezing point Not available.

Boiling point Not applicable

Flash point Not flammable

Evaporation rate Not applicable

Flammability Not available.

Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Vapor pressure	Not applicable
Vapor density	Not applicable
Specific gravity	1.685
Relative density	Not available.
Solubility (water)	Soluble
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
VOC	Not applicable
Percent volatile	Not applicable
Molecular weight	248.1800
Molecular formula	Na2S2O3 5H2O

10. Chemical Stability & Reactivity Information

Chemical stability	Stable at normal conditions.
Conditions to avoid	None known.
Incompatible materials	This product may react with strong acids. This product may react with strong oxidizing agents.
Hazardous decomposition products	Contact with acids releases sulphur dioxide. May release hydrogen sulfide gas, which is highly toxic. Hydrogen sulfide can cause respiratory paralysis and death, depending on the concentration and duration of exposure. Do not rely on ability to smell vapors, since odor fatigue rapidly occurs.
Possibility of hazardous reactions	Will not occur.

11. Toxicological Information

Component analysis - LD50	An LD50 value for this product has not been determined.
Carcinogenicity	Not listed by ACGIH, IARC, NIOSH, NTP OR OSHA.

12. Ecological Information

Ecotoxicity	No data is available on the product itself. This material is not expected to be harmful to aquatic life.
Environmental effects	No data available for this product.
Persistence and degradability	Not available.

13. Disposal Considerations

Disposal instructions	Dispose in accordance with all applicable regulations.

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 - Yes Delayed Hazard - No 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)	Yes
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)	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)	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 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

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 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 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. 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.
Issue date	12-December-2008
This data sheet contains changes from the previous version in section(s):	Other Information: Other information
Other information	CETCO is an AMCOL International company.

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name SODIUM HYDROXIDE
Version # 08
Revision date 12-December-2008
Chemical description Pellet
CAS # 1310-73-2
Synonym(s) CAUSTIC SODA
Manufacturer

CETCO
Construction Drilling Products
2870 Forbs Avenue
Hoffman Estates, IL 60192 US
safetydata@amcol.com
http://www.constructiondrilling.com/
General Information (800) 527-9948
CHEMTREC® (800) 424-9300

2. Hazards Identification

Emergency overview Contact with this material will cause burns to the skin, eyes and mucous membranes. Highly flammable.

Potential health effects

Eyes Substance causes severe eye irritation; injury may be permanent. Liquid, aerosols and vapors of this product are irritating and can cause pain, tearing, reddening and swelling accompanied by a stinging sensation and/or a feeling like that of fine dust in the eyes.

Skin Contact may irritate or burn skin. Immediately corrosive; causes permanent skin damage.

Inhalation Inhalation of vapors or mists of the product may be irritating to the respiratory system. Inhaled corrosive substances can lead to a toxic edema of the lungs.

Ingestion Corrosive and may cause severe and permanent damage to mouth, throat, and stomach. Ingestion of this product may cause nausea, vomiting and diarrhea. Aspiration into lungs may cause chemical pneumonia and lung damage.

3. Composition / Information on Ingredients

Components	CAS #	Percent
SODIUM HYDROXIDE	1310-73-2	90 - 100

4. First Aid Measures

First aid procedures

Eye contact Immediately flush eyes with plenty of water for at least 20 minutes. Keep eye wide open while rinsing. Get medical attention.

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 immediately.

Inhalation If gas/fume/vapor/dust/mist from the material is inhaled, remove the affected person immediately to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get medical attention immediately.

Ingestion If swallowed, rinse mouth with water (only if the person is conscious). Immediately give large quantities of water to drink. If swallowed, do NOT induce vomiting. Call a physician immediately.

Notes to physician Provide general supportive measures and treat symptomatically.

5. Fire Fighting Measures

Flammable properties This material will not burn.

Extinguishing media

Suitable extinguishing media	Use water to cool fire-exposed containers and to protect personnel. Water only; no dry chemical, CO2 or Halon.
Unsuitable extinguishing media	Carbon dioxide (CO2).

Hazardous combustion products None known.

6. Accidental Release Measures

Personal precautions	Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
Environmental precautions	Runoff from fire control or dilution water may be corrosive and/or toxic and cause pollution.
Methods for containment	Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas.
Methods for cleaning up	Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Avoid runoff into storm sewers and ditches which lead to waterways.

7. Handling and Storage

Handling	Do not get this material in your eyes, on your skin, or on your clothing. Do not breathe fumes or dust from this material. Use this product with adequate ventilation. Wash hands after handling and before eating. Wash hands before eating. Avoid breathing dust.
Storage	Keep the container tightly closed and dry. Store away from water, steam, ice, heat, oxidizing agents, and acids. Keep this material away from food, drink and animal feed.

8. Exposure Controls / Personal Protection

Occupational exposure limits

ACGIH

Material	Type	Value
SODIUM HYDROXIDE (1310-73-2)	TWA	2 mg/m3

U.S. - OSHA

Material	Type	Value
SODIUM HYDROXIDE (1310-73-2)	Ceiling	2 mg/m3
	PEL	2 mg/m3

Engineering controls Ensure compliance with applicable exposure limits. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Personal protective equipment

Eye / face protection	Wear chemical goggles. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.
Skin protection	Wear appropriate chemical resistant clothing. The use of neoprene gloves is recommended. Launder contaminated clothing before reuse.
Respiratory protection	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

9. Physical & Chemical Properties

Appearance	Pellets.
Color	White.
Odor	None.
Odor threshold	Not available.
Physical state	Solid.
Form	Not available.

pH	12 12, conc: 0.05% (solution); 13, conc: 1% (solution); 14, conc: 5% (solution)
Melting point	613.4 °F (323 °C)
Freezing point	613.4 °F (323 °C)
Boiling point	2530.4 °F (1388 °C)
Flash point	Not available.
Evaporation rate	Not available.
Flammability	Not available.
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Vapor pressure	0.1333 kPa at 739°C
Vapor density	Not available.
Specific gravity	2.13
Relative density	2.1298 g/cm3 estimated
Solubility (water)	1110 g/l
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Bulk density	1.1 - 1.25 g/cm3 at 20 °C
Molecular weight	40.0000 g/mol
Molecular formula	H-Na-O

10. Chemical Stability & Reactivity Information

Chemical stability	Stable at normal conditions.
Conditions to avoid	Exposure to air or moisture over prolonged periods.
Incompatible materials	Reaction with water may generate much heat which will increase the concentration of fumes in the air. This product reacts with acids. This product may react with metals, halogens.
Hazardous decomposition products	None known.
Possibility of hazardous reactions	Will not occur.

11. Toxicological Information

Toxicological data

Product	Test Results
SODIUM HYDROXIDE (1310-73-2)	Acute LD50 Mouse: 40 mg/kg Acute Dermal Rabbit: 500 mg/day Acute Dermal LD50 Rabbit: 1350 mg/kg

Acute effects	Acute LD50: 40 mg/kg, Mouse 500 mg/day
Chronic effects	Not available.

12. Ecological Information

Ecotoxicological data

Product	Test Results
SODIUM HYDROXIDE (1310-73-2)	EC50 Water flea (Ceriodaphnia dubia): 34.59 - 47.13 mg/l 48.00 Hours LC50 Fish: 45.4 mg/L 96.00 Hours

Persistence and degradability	Not available.

13. Disposal Considerations

Disposal instructions Dispose in accordance with all applicable regulations.

14. Transport Information

DOT

Basic shipping requirements:

UN number	UN1823
Proper shipping name	Sodium hydroxide, solid
Hazard class	8
Packing group	II
Additional information:	
Special provisions	IB8, IP2, IP4, T3, TP33
Packaging exceptions	154
Packaging non bulk	212
Packaging bulk	240
Reportable quantity	1000
ERG number	154

DOT

IATA

Basic shipping requirements:

Proper shipping name	Sodium hydroxide, solid
Hazard class	8
UN number	1823
Packing group	II
Additional information:	
Packaging instructions cargo only	816
Maximum net quantity packaging	15 kg
Maximum net quantity packaging cargo only	50 kg
ERG code	8L

IATA

IMDG

Basic shipping requirements:

Proper shipping name	SODIUM HYDROXIDE, SOLID
Hazard class	8
UN number	1823
Packing group	II

IMDG

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

SODIUM HYDROXIDE: 1000.0000

Superfund Amendments and Reauthorization Act of 1986 (SARA)

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

Section 302 extremely hazardous substance No

Section 311 hazardous chemical Yes

Clean Water Act (CWA) Hazardous substance

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

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 (IECSC)	Yes
Europe	European Inventory of New and Existing Chemicals (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
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)

State regulations

US - Pennsylvania RTK - Hazardous Substances: Listed substance

SODIUM HYDROXIDE (1310-73-2) Listed.

16. Other Information

HMIS ratings

NFPA ratings

Health: 3
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

12-December-2008

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name SODIUM BICARBONATE

Version # 07

Revision date 12-December-2008

CAS # 144-55-8

Synonym(s) BICARBONATE OF SODA * SODIUM ACID CARBONATE * SODIUM HYDROGEN CARBONATE

Manufacturer

CETCO
Construction Drilling Products
2870 Forbs Avenue
Hoffman Estates, IL 60192 US
safetydata@amcol.com
http://www.constructiondrilling.com/
General Information (800) 527-9948
CHEMTREC® (800) 424-9300

2. Hazards Identification

Potential health effects

Eyes This product may cause slight irritation to the eyes.

Skin Non-irritating to the skin. Not expected to be a primary skin irritant.

Inhalation Dusts of this product may cause irritation of the nose, throat, and respiratory tract.

Ingestion Ingestion of large amounts may produce gastrointestinal disturbances including irritation, nausea, and diarrhea.

Chronic effects None known.

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.

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.

Inhalation Remove to fresh air. If tightness or congestion develops, get medical attention.

Ingestion Give several glasses of water. If ingestion of a large amount does occur, seek medical attention.

5. Fire Fighting Measures

Flammable properties This material will not burn.

Extinguishing media

Suitable extinguishing media Use any media suitable for the surrounding fires.

6. Accidental Release Measures

Personal precautions Ventilate enclosed areas.

Methods for cleaning up Clean up spills immediately, observing precautions in Protective Equipment section. 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 Keep formation of airborne dusts to a minimum.

Storage Keep at temperatures between 2 and 40°C. Keep in a well-ventilated place. Keep container tightly closed.

8. Exposure Controls / Personal Protection

Occupational exposure limits

ACGIH

Constituents	Type	Value	Form
INERT OR NUISANCE DUST (SEQ250)	TWA	3 mg/m3	Respirable particles.
		10 mg/m3	Inhalable particles.

U.S. - OSHA

Constituents	Type	Value	Form
INERT OR NUISANCE DUST (SEQ250)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
	TWA	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
		50 mppcf	Total dust.
		15 mppcf	Respirable fraction.

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.

Personal protective equipment

Eye / face protection Wear chemical goggles.

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

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

9. Physical & Chemical Properties

Appearance	Crystalline. Powder.
Color	White.
Odor	None.
Odor threshold	Not available.
Physical state	Solid.
Form	Not available.
pH	Not available.
Melting point	Not available.
Freezing point	Not available.
Boiling point	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability	Not available.
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Vapor pressure	< -0.0001 kPa at 25°C
Vapor density	Not available.
Specific gravity	2.159
Relative density	2.2 g/cm3
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Bulk density	0.98 g/cm3 at 20 °C

Percent volatile	0 %
Molecular weight	84.0100 g/mol
Molecular formula	C-H2-O3.Na

10. Chemical Stability & Reactivity Information

Chemical stability	Stable at normal conditions.
Conditions to avoid	Exposure to moisture. High temperatures.
Incompatible materials	Acids.
Hazardous decomposition products	Carbon oxides.
Possibility of hazardous reactions	Will not occur.

11. Toxicological Information

Toxicological data

Product	Test Results
SODIUM BICARBONATE (144-55-8)	Acute Dermal Human: 30 mg/day
	Acute Oral LD50 Rat: 4220 mg/kg

12. Ecological Information

Ecotoxicological data

Product	Test Results
SODIUM BICARBONATE (144-55-8)	EC50 Daphnia: 2350 mg/L 48.00 Hours
	LC50 Fish: 8625 mg/L 96.00 Hours
	LC50 Western mosquitofish (Gambusia affinis): 7550 mg/l 96.00 Hours

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.
Persistence and degradability	Not available.

13. Disposal Considerations

Disposal instructions	Dispose in accordance with all applicable regulations.

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 - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No

Section 302 extremely hazardous substance	No
Section 311 hazardous chemical	No
Food and Drug Administration (FDA)	Total food additive Direct food additive GRAS food additive

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 (IECSC)	Yes
Europe	European Inventory of New and Existing Chemicals (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
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

HMIS ratings

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 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 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. 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.

Issue date	12-December-2008
This data sheet contains changes from the previous version in section(s):	Other Information: Other information
Other information	CETCO is an AMCOL International company.

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name SODA ASH

Version # 06

Revision date 12-December-2008

CAS # 497-19-8

Synonym(s) DISODIUM CARBONATE * SODIUM CARBONATE

Manufacturer

CETCO
Construction Drilling Products
2870 Forbs Avenue
Hoffman Estates, IL 60192 US
safetydata@amcol.com
http://www.constructiondrilling.com/
General Information (800) 527-9948
CHEMTREC® (800) 424-9300

2. Hazards Identification

Potential health effects

Eyes Contact may irritate or burn eyes.

Skin Prolonged and/or repeated skin contact may result in mild irritation or redness.

Inhalation Inhalation of dusts may cause respiratory irritation.

Ingestion Ingestion can cause gastrointestinal irritation, 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.

4. First Aid Measures

First aid procedures

Eye contact Immediately flush eyes with plenty of water for at least 20 minutes. If irritation persists get medical attention.

Skin contact Wash affected area with mild soap and water. Get medical attention if irritation develops or persists. Launder contaminated clothing before reuse.

Inhalation Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. If symptoms persist, get medical attention.

Ingestion Give several glasses of water. Never give anything by mouth to an unconscious person. Call a physician immediately.

Notes to physician Provide general supportive measures and treat symptomatically.

5. Fire Fighting Measures

Flammable properties This material will not burn.

Extinguishing media

Suitable extinguishing media Use any media suitable for the surrounding fires.

Protection of firefighters

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

Hazardous combustion products Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

6. Accidental Release Measures

Environmental precautions	Runoff from fire control or dilution water may cause pollution. Do not let product enter drains. Do not flush into surface water or sanitary sewer system.
Methods for containment	Stop leak if you can do so without risk.
Methods for cleaning up	Vacuum or sweep up material and place in a disposal container. Avoid the generation of dusts during clean-up. After removal flush contaminated area thoroughly with water. Do not flush to sewer.

7. Handling and Storage

Handling	Keep formation of airborne dusts to a minimum. Do not get this material in contact with skin or eyes. Wash hands before eating.
Storage	Keep tightly closed in a dry, cool and well-ventilated place.

8. Exposure Controls / Personal Protection

Exposure guidelines	Contains no substances with occupational exposure limit values.
Engineering controls	Good general ventilation should be sufficient to control airborne levels.
Personal protective equipment	
Eye / face protection	Wear safety glasses with side shields.
Skin protection	Normal work clothing (long sleeved shirts and long pants) is recommended. Use impervious gloves.
Respiratory protection	Use a particulate filter respirator for particulate concentrations exceeding the Occupational Exposure Limit.
General hygeine considerations	Use good industrial hygiene practices in handling this material. Keep away from food, drink and animal feeding stuffs. Keep away from tobacco products. Wash hands before breaks and immediately after handling the product.

9. Physical & Chemical Properties

Appearance	Granular.
Color	White. or Off-white.
Odor	None.
Odor threshold	Not available.
Physical state	Solid.
Form	Powder. or granular
pH	11.3 - 11.5 (1% aqueous solution)
Melting point	1563.8 °F (851 °C) estimated
Freezing point	Not available.
Boiling point	2912 °F (1600 °C)
Flash point	Not available.
Evaporation rate	Not available.
Flammability	Not available.
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Specific gravity	2.4002 - 2.53 @ 20 C
Relative density	2.4 g/cm3 estimated
Solubility (water)	220 g/L
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
VOC	0 % estimated

Bulk density	> 1 g/cm3 @ 20 °C
Percent volatile	0 % estimated
Molecular weight	105.9900
Molecular formula	Na2.CO3

10. Chemical Stability & Reactivity Information

Chemical stability	Stable at normal conditions.
Conditions to avoid	High temperatures.
Incompatible materials	Fluorine. Moist air. Acids. Sulfuric acid. finely divided aluminium
Hazardous decomposition products	Carbon oxides.
Possibility of hazardous reactions	Will not occur.

11. Toxicological Information

Acute effects	Acute eye irritation/corrosion Mild skin irritation

12. Ecological Information

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

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 - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No
Section 302 extremely hazardous substance	No
Section 311 hazardous chemical	No
Food and Drug Administration (FDA)	Total food additive GRAS food additive

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes

Country(s) or region	Inventory name	On inventory (yes/no)*
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 New and Existing Chemicals (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	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)

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

NFPA ratings Health: 2
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 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 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. 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.

Issue date 12-December-2008

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

Other information CETCO is an AMCOL International company.

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name PREMIUM GEL®

Version # 09

Revision date 12-December-2008

Synonym(s) SMECTITE CLAY

Manufacturer

CETCO
Construction Drilling Products
2870 Forbs Avenue
Hoffman Estates, IL 60192 US
safetydata@amcol.com
http://www.constructiondrilling.com/
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 pneumocononiosis, 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 Bentonite contains naturally occurring crystalline silica (not listed in Annex I of Directive 67/548/EEC) in quantities less than%. Occupational Exposure Limits for impurities are listed in Section 8.

4. First Aid Measures

First aid procedures

Eye contact Flush eyes immediately with large amounts of water. If irritation persists get medical attention.

Skin contact No special measures required. Get medical attention if irritation develops or persists.

Inhalation Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get medical attention, if needed.

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 This material will not burn.

Extinguishing media

Suitable extinguishing media Use any media suitable for the surrounding fires. Dry chemical, CO2, water spray or regular foam.

Protection of firefighters

Protective equipment and precautions for firefighters	Material can be slippery when wet
Hazardous combustion products	None known.

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 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

Impurities	Type	Value	Form
INERT OR NUISANCE DUST (SEQ250)	TWA	10 mg/m3	Inhalable particles.
		3 mg/m3	Respirable particles.
QUARTZ (14808-60-7)	TWA	0.025 mg/m3	Respirable fraction.

U.S. - OSHA

Impurities	Type	Value	Form
INERT OR NUISANCE DUST (SEQ250)	PEL	15 mg/m3	Total dust.
		5 mg/m3	Respirable fraction.
	TWA	5 mg/m3	Respirable fraction.
		50 mppcf	Total dust.
		15 mppcf	Respirable fraction.
		15 mg/m3	Total dust.
QUARTZ (14808-60-7)	TWA	2.4 mppcf	Respirable.
		0.3 mg/m3	Total dust.
		0.1 mg/m3	Respirable.
		0.1 mg/m3	Respirable dust.

Exposure guidelines	Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled.
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. Eye wash fountain is recommended.
Skin protection	No special protective equipment required.
Respiratory protection	Use a particulate filter respirator for particulate concentrations exceeding the Occupational Exposure Limit.
General hygeine considerations	Use good industrial hygiene practices in handling this material.

9. Physical & Chemical Properties

Appearance	Not available.
Color	Not available.

Odor	None.
Odor threshold	Not available.
Physical state	Solid.
Form	Granular. Powder. Pellets. or Chips.
pH	7 - 11
Melting point	Not available.
Freezing point	Not available.
Boiling point	Not available.
Flash point	Non-flammable
Evaporation rate	Not available.
Flammability	Not available.
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Non-explosive
Vapor pressure	Not available.
Vapor density	Not available.
Specific gravity	2.5497 estimated
Relative density	Not available.
Solubility (water)	Negligible
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
VOC	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

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

IARC Monographs on Occupational Exposures to Chemical Agents: Overall evaluation

QUARTZ (14808-60-7) 1 Human carcinogen.

US ACGIH Threshold Limit Values: A2 carcinogen

QUARTZ (14808-60-7) Group A2 Suspected human carcinogen.

US NTP Report on Carcinogens: Known carcinogen

QUARTZ (14808-60-7) Known carcinogen.

12. Ecological Information

Ecotoxicological data

Product	Test Results
SUPER GEL®	LC50 Fish: 19005 mg/l 96.00 Hours estimated

* Estimates for product may be based on additional component data not shown.

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.

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)	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 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)	Yes
New Zealand	New Zealand Inventory	Yes

Country(s) or region	Inventory name	On inventory (yes/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)

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

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance
QUARTZ (14808-60-7) Listed.
US - California Proposition 65 - CRT: Listed date/Carcinogenic substance
QUARTZ (14808-60-7) Listed: October 1, 1988 Carcinogenic.
US - Pennsylvania RTK - Hazardous Substances: Listed substance
QUARTZ (14808-60-7) Listed.

16. Other Information

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

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.

HMIS ratings

NFPA ratings Health: 1
Flammability: 0
Instability: 0

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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. 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.

Issue date 12-December-2008

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

Other information CETCO is an AMCOL International company.

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name SUPER GEL-X®

Version # 09

Revision date 12-December-2008

Synonym(s) SMECTITE CLAY

Manufacturer

CETCO
Construction Drilling Products
2870 Forbs Avenue
Hoffman Estates, IL 60192 US
safetydata@amcol.com
http://www.constructiondrilling.com/
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 pneumocononiosis, 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 Bentonite contains naturally occurring crystalline silica (not listed in Annex I of Directive 67/548/EEC) in quantities less than%. Occupational Exposure Limits for impurities are listed in Section 8.

4. First Aid Measures

First aid procedures

Eye contact Flush eyes immediately with large amounts of water. If irritation persists get medical attention.

Skin contact No special measures required. Get medical attention if irritation develops or persists.

Inhalation Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get medical attention, if needed.

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 This material will not burn.

Extinguishing media

Suitable extinguishing media Use any media suitable for the surrounding fires. Dry chemical, CO2, water spray or regular foam.

Protection of firefighters

Protective equipment and precautions for firefighters	Material can be slippery when wet
Hazardous combustion products	None known.

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 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

Impurities	Type	Value	Form
INERT OR NUISANCE DUST (SEQ250)	TWA	10 mg/m3	Inhalable particles.
		3 mg/m3	Respirable particles.
QUARTZ (14808-60-7)	TWA	0.025 mg/m3	Respirable fraction.

U.S. - OSHA

Impurities	Type	Value	Form
INERT OR NUISANCE DUST (SEQ250)	PEL	15 mg/m3	Total dust.
		5 mg/m3	Respirable fraction.
	TWA	5 mg/m3	Respirable fraction.
		50 mppcf	Total dust.
		15 mppcf	Respirable fraction.
		15 mg/m3	Total dust.
QUARTZ (14808-60-7)	TWA	2.4 mppcf	Respirable.
		0.3 mg/m3	Total dust.
		0.1 mg/m3	Respirable.
		0.1 mg/m3	Respirable dust.

Exposure guidelines	Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled.
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. Eye wash fountain is recommended.
Skin protection	No special protective equipment required.
Respiratory protection	Use a particulate filter respirator for particulate concentrations exceeding the Occupational Exposure Limit.
General hygeine considerations	Use good industrial hygiene practices in handling this material.

9. Physical & Chemical Properties

Appearance	Not available.
Color	Not available.

Odor	None.
Odor threshold	Not available.
Physical state	Solid.
Form	Granular. Powder. Pellets. or Chips.
pH	7 - 11
Melting point	Not available.
Freezing point	Not available.
Boiling point	Not available.
Flash point	Non-flammable
Evaporation rate	Not available.
Flammability	Not available.
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Non-explosive
Vapor pressure	Not available.
Vapor density	Not available.
Specific gravity	2.5497 estimated
Relative density	Not available.
Solubility (water)	Negligible
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
VOC	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

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

IARC Monographs on Occupational Exposures to Chemical Agents: Overall evaluation

QUARTZ (14808-60-7) 1 Human carcinogen.

US ACGIH Threshold Limit Values: A2 carcinogen

QUARTZ (14808-60-7) Group A2 Suspected human carcinogen.

US NTP Report on Carcinogens: Known carcinogen

QUARTZ (14808-60-7) Known carcinogen.

12. Ecological Information

Ecotoxicological data

Product	Test Results
SUPER GEL®	LC50 Fish: 19005 mg/l 96.00 Hours estimated

* Estimates for product may be based on additional component data not shown.

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.

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)	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 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)	Yes
New Zealand	New Zealand Inventory	Yes

Country(s) or region	Inventory name	On inventory (yes/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)

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

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance
QUARTZ (14808-60-7) Listed.
US - California Proposition 65 - CRT: Listed date/Carcinogenic substance
QUARTZ (14808-60-7) Listed: October 1, 1988 Carcinogenic.
US - Pennsylvania RTK - Hazardous Substances: Listed substance
QUARTZ (14808-60-7) Listed.

16. Other Information

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

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.

HMIS ratings

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 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 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. 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.

Issue date 12-December-2008

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

Other information CETCO is an AMCOL International company.

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name PUREGOLD® GEL

Version # 10

Revision date 17-December-2008

Synonym(s) SMECTITE CLAY

Manufacturer

CETCO
Construction Drilling Products
2870 Forbs Avenue
Hoffman Estates, IL 60192 US
safetydata@amcol.com
http://www.constructiondrilling.com/
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 pneumocononiosis, 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 Bentonite contains naturally occurring crystalline silica (not listed in Annex I of Directive 67/548/EEC) in quantities less than%. Occupational Exposure Limits for impurities are listed in Section 8.

4. First Aid Measures

First aid procedures

Eye contact Flush eyes immediately with large amounts of water. If irritation persists get medical attention.

Skin contact No special measures required. Get medical attention if irritation develops or persists.

Inhalation Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get medical attention, if needed.

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 This material will not burn.

Extinguishing media

Suitable extinguishing media Use any media suitable for the surrounding fires. Dry chemical, CO2, water spray or regular foam.

Protection of firefighters

Protective equipment and precautions for firefighters	Material can be slippery when wet
Hazardous combustion products	None known.

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 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

Impurities	Type	Value	Form
INERT OR NUISANCE DUST (SEQ250)	TWA	10 mg/m3	Inhalable particles.
		3 mg/m3	Respirable particles.
QUARTZ (14808-60-7)	TWA	0.025 mg/m3	Respirable fraction.

U.S. - OSHA

Impurities	Type	Value	Form
INERT OR NUISANCE DUST (SEQ250)	PEL	15 mg/m3	Total dust.
		5 mg/m3	Respirable fraction.
	TWA	5 mg/m3	Respirable fraction.
		50 mppcf	Total dust.
		15 mppcf	Respirable fraction.
		15 mg/m3	Total dust.
QUARTZ (14808-60-7)	TWA	2.4 mppcf	Respirable.
		0.3 mg/m3	Total dust.
		0.1 mg/m3	Respirable.
		0.1 mg/m3	Respirable dust.

Exposure guidelines	Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled.
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. Eye wash fountain is recommended.
Skin protection	No special protective equipment required.
Respiratory protection	Use a particulate filter respirator for particulate concentrations exceeding the Occupational Exposure Limit.
General hygeine considerations	Use good industrial hygiene practices in handling this material.

9. Physical & Chemical Properties

Appearance	Not available.
Color	Not available.

Odor	None.
Odor threshold	Not available.
Physical state	Solid.
Form	Granular. Powder. Pellets. or Chips.
pH	7 - 11
Melting point	Not available.
Freezing point	Not available.
Boiling point	Not available.
Flash point	Non-flammable
Evaporation rate	Not available.
Flammability	Not available.
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Non-explosive
Vapor pressure	Not available.
Vapor density	Not available.
Specific gravity	2.5497 estimated
Relative density	Not available.
Solubility (water)	Negligible
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
VOC	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

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

IARC Monographs on Occupational Exposures to Chemical Agents: Overall evaluation

QUARTZ (14808-60-7) 1 Human carcinogen.

US ACGIH Threshold Limit Values: A2 carcinogen

QUARTZ (14808-60-7) Group A2 Suspected human carcinogen.

US NTP Report on Carcinogens: Known carcinogen

QUARTZ (14808-60-7) Known carcinogen.

12. Ecological Information

Ecotoxicological data

Product	Test Results
SUPER GEL®	LC50 Fish: 19005 mg/l 96.00 Hours estimated

* Estimates for product may be based on additional component data not shown.

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.

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)	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 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)	Yes
New Zealand	New Zealand Inventory	Yes

Country(s) or region	Inventory name	On inventory (yes/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)

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

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance
QUARTZ (14808-60-7) Listed.
US - California Proposition 65 - CRT: Listed date/Carcinogenic substance
QUARTZ (14808-60-7) Listed: October 1, 1988 Carcinogenic.
US - Pennsylvania RTK - Hazardous Substances: Listed substance
QUARTZ (14808-60-7) Listed.

16. Other Information

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

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.

HMIS ratings

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 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 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. 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.

Issue date 17-December-2008

Other information CETCO is an AMCOL International company.

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name BENTOGROUT®

Version # 06

Revision date 12-December-2008

Manufacturer
CETCO
Construction Drilling Products
2870 Forbs Avenue
Hoffman Estates, IL 60192 US
safetydata@amcol.com
http://www.constructiondrilling.com/
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 Inhalation of dusts may cause respiratory irritation. 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 pneumocononiosis, 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

Non-hazardous components	CAS #	Percent
BENTONITE	1302-78-9	90 - 100
Other components below reportable levels		> 2.5

Composition comments Bentonite contains naturally occurring crystalline silica (not listed in Annex I of Directive 67/548/EEC) in quantities less than%.

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, CO2, water spray or regular foam.

Protection of firefighters

Protective equipment and precautions for firefighters Material can be slippery when wet

Hazardous combustion products None known.

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	Type	Value	Form
INERT OR NUISANCE DUST (SEQ250)	TWA	10 mg/m3	Inhalable particles.
		3 mg/m3	Respirable particles.
QUARTZ (14808-60-7)	TWA	0.025 mg/m3	Respirable fraction.

U.S. - OSHA

Constituents	Type	Value	Form
INERT OR NUISANCE DUST (SEQ250)	PEL	15 mg/m3	Total dust.
		5 mg/m3	Respirable fraction.
	TWA	5 mg/m3	Respirable fraction.
		50 mppcf	Total dust.
		15 mppcf	Respirable fraction.
		15 mg/m3	Total dust.
QUARTZ (14808-60-7)	TWA	2.4 mppcf	Respirable.
		0.3 mg/m3	Total dust.
		0.1 mg/m3	Respirable.
		0.1 mg/m3	Respirable dust.

Exposure guidelines Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled.

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 hygeine 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	Powder.
pH	7 - 9
Melting point	Not available.
Freezing point	Not available.
Boiling point	Not available.
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	2.4482 estimated
Relative density	Not available.
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

Toxicological data

Product	Test Results
BENTOGROUT®	Acute Inhalation LC50 Rat: 14.5 mg/l/4h
	Acute Oral LD50 Mouse: 66250 mg/kg estimated
	Acute Oral LD50 Rat: 45000 mg/kg estimated

* Estimates for product may be based on additional component data not shown.

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

IARC Monographs on Occupational Exposures to Chemical Agents: Overall evaluation

QUARTZ (14808-60-7)	1 Human carcinogen.

US ACGIH Threshold Limit Values: A2 carcinogen

QUARTZ (14808-60-7)	Group A2 Suspected human carcinogen.

US NTP Report on Carcinogens: Known carcinogen

QUARTZ (14808-60-7)	Known carcinogen.

12. Ecological Information

Ecotoxicological data

Product	Test Results
BENTOGROUT®	LC50 Fish: 19792 mg/l 96.00 Hours estimated
Components	**Test Results**
BENTONITE (1302-78-9)	LC50 Rainbow trout,donaldson trout (Oncorhynchus mykiss): 19000 mg/l 96.00 Hours

* Estimates for product may be based on additional component data not shown.

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.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - Yes 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)	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 New and Existing Chemicals (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
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)

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

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

QUARTZ (14808-60-7) Listed.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

QUARTZ (14808-60-7) Listed: October 1, 1988 Carcinogenic.

US - Pennsylvania RTK - Hazardous Substances: Listed substance

QUARTZ (14808-60-7) Listed.

16. Other Information

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

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.

HMIS ratings

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 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 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. 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.
Issue date	12-December-2008
This data sheet contains changes from the previous version in section(s):	Composition / Information on Ingredients: Composition comments Other Information: Other information
Other information	CETCO is an AMCOL International company.

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name SUPER THIN™

Version # 04

Revision date 12-December-2008

Chemical description Acrylic polymer in an aqueous solution

CAS # Mixture

Manufacturer

CETCO
Construction Drilling Products
2870 Forbs Avenue
Hoffman Estates, IL 60192 US
safetydata@amcol.com
http://www.constructiondrilling.com/
General Information (800) 527-9948
CHEMTREC® (800) 424-9300

2. Hazards Identification

OSHA regulatory status This product is considered not hazardous under 29 CFR 1910.1200 (Hazard Communication).

Potential health effects

Eyes This product may cause slight irritation to the eyes. Symptoms include itching, burning, redness and tearing.

Skin Prolonged exposure may cause skin irritation.

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.

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 immediately with soap and plenty of water. Get medical attention if irritation develops or persists.

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

Ingestion If the material is swallowed, get immediate medical attention or advice -- Do not induce vomiting.

General advice If you feel unwell, seek medical advice (show the label where possible).

5. Fire Fighting Measures

Flammable properties None known.

Extinguishing media

Suitable extinguishing media Dry chemical, CO2, water spray or regular foam. Use any media suitable for the surrounding fires.

Protection of firefighters

Protective equipment and precautions for firefighters Cool containers with flooding quantities of water until well after fire is out.

Hazardous combustion products None known.

6. Accidental Release Measures

Personal precautions	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.
Methods for containment	Stop leak if you can do so without risk.
Methods for cleaning up	Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container.

7. Handling and Storage

Handling	Use this product with adequate ventilation.
Storage	Keep in a dry, cool and well-ventilated place. Freezing will affect the physical condition but will not damage the material. Thaw and mix before using.

8. Exposure Controls / Personal Protection

Engineering controls	Good general ventilation should be sufficient to control airborne levels. Ventilation should effectively remove and prevent buildup of any vapor/mist/fume/dust generated from the handling of this product. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.
Personal protective equipment	
Eye / face protection	Wear chemical goggles and face shield.
Skin protection	Wear appropriate chemical resistant gloves. Wear appropriate chemical resistant clothing.
Respiratory protection	No personal respiratory protective equipment normally required. If ventilation is not sufficient to effectively prevent buildup of aerosols or mists, appropriate NIOSH/MSHA respiratory protection must be provided.

9. Physical & Chemical Properties

Appearance	Clear.
Color	Light yellow.
Odor	Slight.
Odor threshold	Not available.
Physical state	Liquid.
Form	Aqueous solution.
pH	7.25
Melting point	Not available.
Freezing point	Not available.
Boiling point	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability	Not available.
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Vapor pressure	0.05 hPa estimated
Vapor density	Not available.
Specific gravity	1.27
Relative density	Not available.
Solubility (water)	Soluble
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
VOC	1.1 %
Percent volatile	60.04 % estimated

10. Chemical Stability & Reactivity Information

Chemical stability	Stable at normal conditions. No hazards to be especially mentioned.
Conditions to avoid	Extremes of temperature and direct sunlight.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	At thermal decomposition temperatures, carbon monoxide and carbon dioxide.
Possibility of hazardous reactions	Will not occur.

11. Toxicological Information

Toxicological data

Product	Test Results
SUPER THIN™ (Mixture)	Acute Dermal LD50 Rabbit: 99999 mg/kg
	Acute Dermal LD50 Rat: 99999 mg/kg
	Acute Inhalation LC50 Rat: 99999 mg/l/4h
	Acute Oral LD50 Rat: 94384 mg/kg estimated

* Estimates for product may be based on additional component data not shown.

Acute effects	Acute LD50: 94384 mg/kg, Rat, Oral, estimated
Carcinogenicity	Not listed by ACGIH, IARC, NIOSH, NTP OR OSHA.
Mutagenicity	Not mutagenic in AMES Test.
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.
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.

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

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 (IECSC)	Yes
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)	Yes
New Zealand	New Zealand Inventory	Yes
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)

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.

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.

HMIS ratings

NFPA ratings
Health: 1
Flammability: 0
Instability: 0

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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. 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.

Issue date 12-December-2008

This data sheet contains changes from the previous version in section(s):	Other Information: Other information
Other information	CETCO is an AMCOL International company.

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name MULTI-SEAL™

Version # 06

Revision date 12-December-2008

Chemical description Blended Fibrous Materials

CAS # Mixture

Manufacturer

CETCO
Construction Drilling Products
2870 Forbs Avenue
Hoffman Estates, IL 60192 US
safetydata@amcol.com
http://www.constructiondrilling.com/
General Information (800) 527-9948
CHEMTREC® (800) 424-9300

2. Hazards Identification

OSHA regulatory status This product is considered not hazardous under 29 CFR 1910.1200 (Hazard Communication).

Potential health effects

Eyes Dust or powder may irritate eye tissue.

Skin Non-irritating to the skin. Not expected to be a primary skin irritant.

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. If irritation persists get medical attention.

Skin contact No special measures required.

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.

5. Fire Fighting Measures

Flammable properties None known.

Extinguishing media

Suitable extinguishing media Dry chemical, CO2, water spray or regular foam. Use any media suitable for the surrounding fires.

Hazardous combustion products None known.

6. Accidental Release Measures

Environmental precautions No special environmental precautions required.

Methods for containment Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area).

Methods for cleaning up Avoid the generation of dusts during clean-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. Avoid breathing dusts from this material. Provide appropriate exhaust ventilation at places where dust is formed. Keep this product from heat, sparks, or open flame.

Storage Guard against dust accumulation of this material. Keep in a dry, cool and well-ventilated place.

8. Exposure Controls / Personal Protection

Occupational exposure limits

ACGIH

Constituents	Type	Value	Form
INERT OR NUISANCE DUST (SEQ250)	TWA	3 mg/m3	Respirable particles.
		10 mg/m3	Inhalable particles.

U.S. - OSHA

Constituents	Type	Value	Form
INERT OR NUISANCE DUST (SEQ250)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
	TWA	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
		50 mppcf	Total dust.
		15 mppcf	Respirable fraction.

Engineering controls Good general ventilation should be sufficient to control airborne levels. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Personal protective equipment

Eye / face protection Wear safety glasses with side shields.

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

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

General hygeine considerations Use good industrial hygiene practices in handling this material.

9. Physical & Chemical Properties

Appearance Fabric/Mat

Color Not available.

Odor Woody.

Odor threshold Not available.

Physical state Solid.

Form Not available.

pH Not available.

Melting point Not available.

Freezing point Not available.

Boiling point Not available.

Flash point > 350 °F (> 176.7 °C) Pensky-Martens Closed Cup

Evaporation rate Not available.

Flammability Not available.

Flammability limits in air, upper, % by volume Not available.

Flammability limits in air, lower, % by volume Not available.

Vapor pressure Not available.

Vapor density Not available.

Specific gravity	Not available.
Relative density	Not available.
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.

10. Chemical Stability & Reactivity Information

Chemical stability	Stable at normal conditions. No hazards to be especially mentioned.
Conditions to avoid	Exposure to moisture. Heat, flames and sparks.
Incompatible materials	None known.
Hazardous decomposition products	None known.
Possibility of hazardous reactions	Will not occur.

11. Toxicological Information

Chronic effects	Overexposure to dusts may result in pneumoconiosis, a lung disease due to permanent deposition of substantial amounts of particulate matter in the lungs.
Carcinogenicity	Not listed by ACGIH, IARC, NIOSH, NTP OR OSHA.

12. Ecological Information

Ecotoxicity	No data available for this product. This material is not expected to be harmful to aquatic life.
Environmental effects	No data available for this product. 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.

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

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)	No
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	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

NFPA ratings
Health: 0
Flammability: 0
Instability: 0

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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. 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.

Issue date 12-December-2008

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

Other information CETCO is an AMCOL International company.

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name	HYDRO-PAC®
Version #	07
Revision date	12-December-2008
Chemical description	Powder
CAS #	Mixture
Manufacturer	CETCO Construction Drilling Products 2870 Forbs Avenue Hoffman Estates, IL 60192 US safetydata@amcol.com http://www.constructiondrilling.com/ General Information (800) 527-9948 CHEMTREC® (800) 424-9300

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	Dust concentrations greater than 0.03 oz/ft3 may ignite at 590º C or when exposed to ignition source.

Extinguishing media

Suitable extinguishing media	Dry chemical, CO2, water spray or regular foam.

Protection of firefighters

Protective equipment and precautions for firefighters	Material can be slippery when wet. Move containers from fire area if you can do it without risk.

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

Occupational exposure limits

ACGIH

Constituents	Type	Value	Form
INERT OR NUISANCE DUST (SEQ250)	TWA	3 mg/m3	Respirable particles.
		10 mg/m3	Inhalable particles.

U.S. - OSHA

Constituents	Type	Value	Form
INERT OR NUISANCE DUST (SEQ250)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
	TWA	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
		50 mppcf	Total dust.
		15 mppcf	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.
Skin protection	Normal work clothing (long sleeved shirts and long pants) is recommended.
Respiratory protection	Use a particulate filter respirator for particulate concentrations exceeding the Occupational Exposure Limit.
General hygeine 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.

Form	Not available.
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	Not available.
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Specific gravity	0.0013 estimated
Relative density	Not available.
Solubility (water)	Soluble
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	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.
Possibility of hazardous reactions	Will not occur.

11. Toxicological Information

Toxicological data

Product	Test Results
HYDRO-PAC® (Mixture)	Acute Dermal LD50 Rat: 99999 mg/kg
	Acute Inhalation LC50 Rat: 99999 mg/l/4h
	Acute Inhalation LC50 Rat: 651 mg/l estimated
	Acute Oral LD50 Hamster: 11332 mg/kg estimated
	Acute Oral LD50 Mouse: 15166 mg/kg estimated
	Acute Oral LD50 Rabbit: 12438 mg/kg estimated

* Estimates for product may be based on additional component data not shown.

Acute effects	Acute LC50: 651 mg/l, Rat, Inhalation, estimated
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

Ecotoxicological data

Product	Test Results
HYDRO-PAC® (Mixture)	LC50 Fish: 102 mg/l 96.00 Hours estimated

* Estimates for product may be based on additional component data not shown.

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.

Persistence and degradability Not available.

13. Disposal Considerations

Disposal instructions Dispose in accordance with all applicable regulations.

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

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 - Yes
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance No

Section 311 hazardous chemical Yes

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

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 (IECSC)	Yes
Europe	European Inventory of New and Existing Chemicals (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	No

Country(s) or region	Inventory name	On inventory (yes/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

NFPA ratings

Health: 0
Flammability: 2
Instability: 0

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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. 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.

Issue date

12-December-2008

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

Other Information: Other information

Other information

CETCO is an AMCOL International company.