MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name	SC-200™
Version #	02
Revision date	19-December-2008
Chemical description	Liquid
CAS #	Mixture
Manufacturer	CETCO Drilling Products Group 2870 Forbs Avenue Hoffman Estates, IL 60192 US safetydata@amcol.com http://www.cetco.com/ General Information (800) 527-9948 CHEMTREC® (800) 424-9300

2. Hazards Identification

Potential health effects

Eyes	Contact will irritate or burn eyes. 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	Inhalation of vapors or mists of the product may be irritating to the respiratory system.
Ingestion	Ingestion may cause irritation to mucous membranes. 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. Get medical attention immediately.
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.
Ingestion	If swallowed, do NOT induce vomiting. Have victim rinse mouth thoroughly with water. Give victim water or milk. Get medical attention immediately.

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, CO_2, water spray or regular foam. Use any media suitable for the surrounding fires.

6. Accidental Release Measures

Environmental precautions	No special environmental precautions required.
Methods for containment	Dike the spilled material, where this is possible. Stop leak if you can do so without risk.
Methods for cleaning up	Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. After removal flush contaminated area thoroughly with water.

7. Handling and Storage

Handling	Do not get this material in your eyes, on your skin, or on your clothing. Wash hands before eating. Wash hands after handling and before eating. Remove and wash contaminated clothing before re-use.
Storage	Keep this material away from food, drink and animal feed. Keep out of the reach of children. Keep in a dry, cool and well-ventilated place. Keep from freezing.

8. Exposure Controls / Personal Protection

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; chemical goggles (if splashing is possible).
Skin protection	Normal work clothing (long sleeved shirts and long pants) is recommended. Launder contaminated clothing before reuse.
Respiratory protection	Not normally needed.
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	Not available.
Color	Yellow.
Odor	Slight.
Odor threshold	Not available.
Physical state	Liquid.
Form	Not available.
pH	7
Melting point	Not available.
Freezing point	Not available.
Boiling point	> 212 °F (> 100 °C)
Flash point	Not available.
Evaporation rate	< 1 water = 1
Flammability	Not available.
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Vapor pressure	1.31 hPa estimated
Vapor density	Not available.
Specific gravity	1
Relative density	Not available.
Solubility (water)	Soluble
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	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
SC-200™ (Mixture)	Acute Inhalation LC50 Rat: 11 mg/l/4h
	Acute Oral LD50 Rat:

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

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 - 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)	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

Country(s) or region	Inventory name	On inventory (yes/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: 1
Flammability: 0
Instability: 0

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

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

Issue date 19-December-2008

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name	DPA™
Version #	04
Revision date	28-May-2009
Chemical description	Solid
CAS #	Mixture
Company	CETCO Drilling Products Group 2870 Forbs Avenue Hoffman Estates, IL 60192 US safetydata@amcol.com http://www.cetco.com/ General Information (800) 527-9948 CHEMTREC® (800) 424-9300

2. Hazards Identification

Potential health effects

Routes of exposure	Ingestion. Inhalation. Eye contact Skin contact.
Eyes	Can cause severe eye irritation. Symptoms include itching, burning, redness and tearing.
Skin	Contact with liquid may produce severe skin irritation including redness, inflammation and chemical burns.
Inhalation	Can cause severe respiratory irritation. Inhalation of vapors/fumes generated by heating this product may cause respiratory irritation with throat discomfort, coughing or difficulty breathing.
Ingestion	Harmful if swallowed. Ingestion may produce burns to the lips, oral cavity, upper airway, esophagus and possibly the digestive tract.

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	Immediately flush skin with running water for at least 20 minutes. Remove and isolate contaminated clothing and shoes. Launder contaminated clothing before reuse. Get medical attention if irritation develops or persists.
Inhalation	If exposed to excessive levels of dusts or fumes, remove to fresh air and get medical attention if cough or other symptoms develop.
Ingestion	If the material is swallowed, get immediate medical attention or advice -- Do not induce vomiting. Have victim rinse mouth thoroughly with water. Give victim water or milk.

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	Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Do not touch or walk through spilled material.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Do not flush into surface water or sanitary sewer system. 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. Dike the spilled material, where this is possible.

Methods for cleaning up	Large spills may be neutralized with dilute alkaline solutions of soda ash, or lime. Vacuum or sweep up material and place in a disposal container. Clean contaminated surface thoroughly.

7. Handling and Storage

Handling	Avoid contact with skin and eyes. Do not get this material in your eyes, on your skin, or on your clothing. When using do not eat or drink. Wash hands after handling and before eating.
Storage	Keep locked-up. Keep out of the reach of children. Keep this material away from food, drink and animal feed. Keep containers tightly closed in a dry, cool and well-ventilated place.

8. Exposure Controls / Personal Protection

Engineering controls	Local exhaust is suggested for use, where possible, in enclosed or confined spaces.
Personal protective equipment	
Eye / face protection	Wear safety glasses; chemical goggles (if splashing is possible).
Skin protection	Wear appropriate chemical resistant gloves. Use of butyl rubber or nitrile gloves is recommended Normal work clothing (long sleeved shirts and long pants) is recommended. Where contact is likely, wear chemical-resistant gloves, a chemical suit, rubber boots, and chemical safety goggles plus a face shield.
Respiratory protection	No personal respiratory protective equipment normally required. If ventilation is not sufficient to effectively prevent buildup of aerosols or vapors, appropriate NIOSH/MSHA respiratory protection must be provided.
General hygeine considerations	When using do not eat or drink. Keep away from food, drink and animal feeding stuffs. Use good industrial hygiene practices in handling this material.

9. Physical & Chemical Properties

Appearance	Powder.
Color	Dark violet.
Odor	None.
Odor threshold	Not available.
Physical state	Solid.
Form	powder
pH	1
Melting point	579.2 °F (304 °C) estimated
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	0.19 hPa estimated
Vapor density	Not available.
Specific gravity	1.8401 estimated
Relative density	1.8399 g/cm3 estimated
Solubility (water)	Complete
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. No hazards to be especially mentioned.
Conditions to avoid	None known.

Incompatible materials	May react with strong bases or oxidizing agents.
Hazardous decomposition products	Upon decomposition, this product may yield sulfur dioxide, 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
DPA™ (Mixture)	Acute Dermal LD50 Rabbit: 30930 mg/kg Acute Oral LD50 Mouse: 28160 mg/kg estimated Acute Oral LD50 Rat: 1766 mg/kg estimated Acute Other LD50 Mouse: 18318 mg/kg estimated

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

Acute effects	Acute LD50: 30930 mg/kg, Rabbit, Dermal Acute LD50: 28160 mg/kg, Mouse, Oral, estimated
Carcinogenicity	Not listed by ACGIH, IARC, NIOSH, NTP OR OSHA.
Further information	Corrosive effects.

12. Ecological Information

Ecotoxicological data

Product	Test Results
DPA™ (Mixture)	EC50 Daphnia: 1412 mg/l 48.00 Hours estimated LC50 Fish: 54.98 mg/l 96.00 Hours estimated

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

Ecotoxicity	Because of the low pH of this product, it would be expected to produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems. Components of this product have been identified as having potential environmental concerns.
Environmental effects	Harmful to aquatic life.
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. Do not contaminate ponds, waterways or ditches with chemical or used container.

14. Transport Information

DOT

Basic shipping requirements:

UN number	UN3262
Proper shipping name	Corrosive solid, basic, inorganic, n.o.s. (Sulfamic acid)
Hazard class	8
Packing group	I
Additional information:	
Special provisions	IB7, IP1, T6, TP33
Packaging exceptions	None
Packaging non bulk	211
Packaging bulk	242
ERG number	154

DOT

IATA

Basic shipping requirements:

Proper shipping name	Corrosive solid, basic, inorganic, n.o.s. (Sulfamic acid)
Hazard class	8
UN number	3262
Packing group	I
Additional information:	
Packaging instructions cargo only	811
Maximum net quantity packaging	1 kg
Maximum net quantity packaging cargo only	25 kg
ERG code	8L

IATA

IMDG

Basic shipping requirements:

Proper shipping name	CORROSIVE SOLID, BASIC, INORGANIC, N.O.S. (Sulfamic acid)
Hazard class	8
Subsidiary hazard class	•
UN number	3262
Packing group	I

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

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)	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.

HMIS ratings

NFPA ratings
Health: 3
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.

Issue date 28-May-2009

This data sheet contains changes from the previous version in section(s):
Product and Company Identification: Physical States
Physical & Chemical Properties: Physical & Chemical Properties
Physical & Chemical Properties: Appearance
Physical & Chemical Properties: Form