
Section 1: Product & Company Information

Product Name: Barite 41
Chemical Family: Barium Sulphate
Product Use: Drilling Mud Additive

Workplace Hazardous Materials Information Systems Data (WHMIS):

	Class ID	Class	Workplace Hazard
	None	Not a Controlled Product	

Manufacturer Name: Bri-Chem Supply Ltd.
Address: 2125, 64th Avenue, Edmonton, AB T6P 1Z4 Canada
General Phone Number: (780) 455-8667
General Fax Number: (780) 451-4420
MSDS Revision Date: March 24, 2010
Supercedes: January 1, 2008
Prepared By: Bri-Chem Supply Ltd.
Preparer's Phone: (780) 455-8667

Section 2: Composition/Information on Ingredients

Chemical Name	Concentration	CAS#
No Hazardous Ingredients		

Section 3: Hazards Identification

Emergency Overview: Not available

Routes of Entry:

Skin Contact: Yes
Skin Absorption: No
Eye Contact: Yes
Inhalation: Yes
Ingestion: Yes

Potential Health Effects:

Skin:	N/A
Eye:	May cause slight irritation and/or redness.
Inhalation:	Product is considered a nuisance dust.
Ingestion:	Non-toxic through ingestion

Section 4: First Aid Measures

Eye Contact:	Flush eyes with water for at least 15 minutes. If adverse symptoms develop, seek medical attention.
Skin Contact:	Wash with soap and water. If adverse symptoms develop, seek medical attention.
Inhalation:	Remove patient to fresh air. If breathing has stopped, administer artificial respiration, and seek medical attention.
Ingestion:	If patient is conscious, give them 2 to 4 glasses of water to drink. DO NOT induce vomiting. Seek medical attention. Do not give anything by mouth to an unconscious or convulsing person.
Other First Aid:	Not available

Section 5: Fire Fighting Measures

Conditions Of Flammability:	None known.
Extinguishing Media:	Material does not burn or support combustion.
Flashpoint:	Not available
Upper Flammable Limit:	Not available
Lower Flammable Limit:	Not available
Autoignition Temperature:	Not available
Protective Equipment:	This material is non-flammable.
Sensitivity To Impact or Static Discharge:	Not available
Hazardous Combustion Products:	N/A
Fire Comment:	

Section 6: Accidental Release Measures

Personnel Precautions:	Use proper personal protective equipment as listed in section 8.
Spill Cleanup Measures:	Vacuum or sweep up. Product may be re-used if not contaminated.

Section 7: Handling & Storage

Handling: Avoid ingestion. Practice reasonable caution and personal cleanliness. Avoid skin and eye contact.

Storage: Keep in a cool, dry place.

Section 8: Exposure Controls, Personal Protection, Exposure Guidelines

Engineering Controls: Provide mechanical ventilation to prevent dust concentrations, and to reduce potential exposure.

Personal Protective Equipment: Chemical-resistant clothing is recommended, including gloves, apron, and goggles.

Respiratory Protection: In absence of proper ventilation, recommended NIOSH-approved dust respirator.

Exposure Limits: TLV 10 mg/m³ All forms (ACGIH)

Chemical Name	ACGIH TLV-TWA	OSHA PEL-TWA
No Hazardous Ingredients		

Section 9: Physical & Chemical Properties

Physical State:	Solid
Odour And Appearance:	White to gray powder; odourless
Odour Threshold:	Not available
Boiling Point:	Not available
Evaporation Rate:	Not available
Melting Point:	1580°C
Freezing Point:	Not available
Specific Gravity:	4.2 - 4.4
Solubility in Water:	Insoluble
Vapour Density:	Not available
Vapour Pressure:	Not available
pH:	N/A
Flash Point:	Not available
Volatility (% by volume):	Not available
Coefficient of Water to Oil distribution:	Not available

Section 10: Stability & Reactivity

Chemical Stability:	Yes
Hazardous Polymerization:	Will not occur
Conditions Of Chemical Instability:	N/A
Incompatible Substances:	N/A
Special Decomposition Products:	N/A

Section 11: Toxicological Information

Chemical Name	LD ₅₀ (Oral Rat)	LD ₅₀ (Dermal Rabbit)	LC ₅₀ (Inhalation Rat)
No Hazardous Ingredients			

Effects Of Acute Exposure:	Not determined
Effects Of Chronic Exposure:	Not available
General Irritancy Of Product:	Mechanical irritation due to abrasion
Sensitization:	Not determined
Carcinogenicity:	N/A
Reproductive Toxicity:	N/A
Teratogenicity:	N/A
Embryotoxicity:	Not Available
Mutagenicity:	N/A
Synergistic Products:	N/A

Section 12: Ecological Information

Ecotoxicity:	Not Available
Environmental Fate:	Not Available

Section 13: Disposal Considerations

Waste Disposal:	All waste should be disposed of in accordance with federal, provincial and local regulations. Containers should NOT be re-used. Containers should be disposed of in accordance with government regulations.
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Section 14: Transport Information

TDG Classification: Not regulated
DOT UN Number: N/A
Shipping Notes: No special requirements

Section 15: Regulatory Information

Workplace Hazardous Materials Information Systems Data (WHMIS):

	Class ID	Class	Workplace Hazard
	None	Not a Controlled Product	

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

Section 16: Additional Information

MSDS Revision Date: March 24, 2010
MSDS Revision Notes:
MSDS Author: Bri-Chem Supply Ltd.

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Section 1: Product & Company Information

Product Name: Bentonite - NATURAL GEL

Chemical Family: Sodium Montmorillonite

Product Use: Drilling Mud Additive

Workplace Hazardous Materials Information Systems Data (WHMIS):

	Class ID	Class	Workplace Hazard
	D-2-A	Materials Causing Other Toxic Effects - Very Toxic	Toxic effects

Manufacturer Name: Bri-Chem Supply Ltd.

Address: 2125, 64th Avenue, Edmonton, AB T6P 1Z4 Canada

General Phone Number: (780) 455-8667

General Fax Number: (780) 451-4420

MSDS Revision Date: March 24, 2010

Supercedes: January 1, 2008

Prepared By: Bri-Chem Supply Ltd.

Preparer's Phone: (780) 455-8667

Section 2: Composition/Information on Ingredients

Chemical Name	Concentration	CAS#
Crystalline Silica, Quartz	2 - 6 %	14808-60-7

Section 3: Hazards Identification

Emergency Overview: Not available

Routes of Entry:

Skin Contact: Yes

Skin Absorption: No

Eye Contact: Yes

Inhalation: Yes

Ingestion: No

Potential Health Effects:

Skin:	Possible drying resulting in dermatitis
Eye:	May cause slight irritation and/or redness.
Inhalation:	Acute: (short term) exposure to dust levels exceeding PEL may cause irritation of respiratory tract, resulting in a dry cough. Chronic (long-term) exposure to airborne dust containing respirable size ($\leq 10 \mu\text{m}$) quartz particles, where respirable quartz particle levels are higher the TLVs, may lead to development of silicosis or other respiratory problems. Persistent dry cough and laboured breathing upon exertion may be symptomatic.
Ingestion:	No adverse effects

Section 4: First Aid Measures

Eye Contact:	Flush eyes with water for at least 15 minutes. If adverse symptoms develop, seek medical attention.
Skin Contact:	Wash with soap and water. If adverse symptoms develop, seek medical attention.
Inhalation:	Remove patient to fresh air. If breathing has stopped, administer artificial respiration, and seek medical attention.
Ingestion:	Not Applicable
Other First Aid:	Not available

Section 5: Fire Fighting Measures

Conditions Of Flammability:	None. This product will not support combustion.
Extinguishing Media:	None for product. Any media can be used for packaging.
Flashpoint:	N/A
Upper Flammable Limit:	N/A
Lower Flammable Limit:	N/A
Autoignition Temperature:	N/A
Protective Equipment:	None. This product is non-flammable.
Sensitivity To Impact or Static Discharge:	Not available
Hazardous Combustion Products:	N/A
Fire Comment:	Product becomes slippery when wet.

Section 6: Accidental Release Measures

Personnel Precautions: Use proper personal protective equipment as listed in section 8.

Spill Cleanup Measures: Avoid breathing dust: wear respirator approved for silica bearing dust. Vacuum up to avoid generating airborne dust. Put into approved DOT containers for disposal.

Section 7: Handling & Storage

Handling: Avoid ingestion. Practice reasonable caution and personal cleanliness.

Storage: Store in a cool, dry, well ventilated place. Storage area floors may become slippery if wet.

Section 8: Exposure Controls, Personal Protection, Exposure Guidelines

Engineering Controls: Provide mechanical ventilation to prevent dust concentrations, and to reduce potential exposure.

Personal Protective Equipment: Chemical-resistant clothing is recommended, including gloves, apron, and goggles.

Respiratory Protection: Mechanical, general room ventilation. Use local ventilation to maintain PELs/TLVs.

Exposure Limits: Bentonite as "particulates not otherwise regulated" OSHA PEL (8hr. TWA) Total dust 15 mg/m³. Respirable dust 5 mg/m³. Crystalline Quartz (respirable) 0.1 mg/m³

Chemical Name	ACGIH TLV-TWA	OSHA PEL-TWA
Crystalline Silica, Quartz	0.05 mg/m ³	0.1 mg/m ³

Section 9: Physical & Chemical Properties

Physical State: Solid

Odour And Appearance: Tan to gray; odourless

Odour Threshold: Not available

Boiling Point: Not available

Evaporation Rate: Not available

Melting Point: Approx. 1450°C

Freezing Point: Not available

Specific Gravity: 2.45 - 2.55

Solubility in Water: Insoluble, forms colloidal suspension

Vapour Density:	Not available
Vapour Pressure:	Not available
pH:	8 - 10 (5% aqueous suspension)
Flash Point:	N/A
Volatility (% by volume):	Not available
Coefficient of Water to Oil distribution:	Not available

Section 10: Stability & Reactivity

Chemical Stability:	Yes
Hazardous Polymerization:	Will not occur
Conditions Of Chemical Instability:	N/A
Incompatible Substances:	N/A
Special Decomposition Products:	None known.

Section 11: Toxicological Information

Chemical Name	LD ₅₀ (Oral Rat)	LD ₅₀ (Dermal Rabbit)	LC ₅₀ (Inhalation Rat)
Crystalline Silica, Quartz	Not Available	Not Available	Not Available

Effects Of Acute Exposure:	Not available
Effects Of Chronic Exposure:	Not available
General Irritancy Of Product:	Not available
Sensitization:	Not available
Carcinogenicity:	Not available
Reproductive Toxicity:	Not available
Teratogenicity:	Not available
Embryotoxicity:	Not Available
Mutagenicity:	Not available
Synergistic Products:	Not available

Section 12: Ecological Information

Ecotoxicity:	Not Available
Environmental Fate:	Not Available

Section 13: Disposal Considerations


Waste Disposal: All waste should be disposed of according to federal, provincial and local regulations. Containers should NOT be re-used. Containers should be disposed of in accordance with government regulations.

Section 14: Transport Information

TDG Classification: Not regulated
DOT UN Number: N/A
Shipping Notes: No special requirements

Section 15: Regulatory Information

Workplace Hazardous Materials Information Systems Data (WHMIS):

	Class ID	Class	Workplace Hazard
	D-2-A	Materials Causing Other Toxic Effects - Very Toxic	Toxic effects

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

Section 16: Additional Information




MSDS Revision Date: March 24, 2010
MSDS Revision Notes:
MSDS Author: Bri-Chem Supply Ltd.

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Section 1: Product & Company Information

Product Name: Caustic Soda
Chemical Family: Alkali Hydroxide
Product Use: Drilling Mud Additive

Workplace Hazardous Materials Information Systems Data (WHMIS):

	Class ID	Class	Workplace Hazard
	D-1-B	Materials Causing Immediate/Serious Toxic Effects - Toxic	Immediate serious toxic effects
	E	Corrosive Materials	Corrosive

Manufacturer Name: Bri-Chem Supply Ltd.
Address: 2125, 64th Avenue, Edmonton, AB T6P 1Z4 Canada
General Phone Number: (780) 455-8667
General Fax Number: (780) 451-4420
MSDS Revision Date: March 24, 2010
Supercedes: January 1, 2008
Prepared By: Bri-Chem Supply Ltd.
Preparer's Phone: (780) 455-8667

Section 2: Composition/Information on Ingredients

Chemical Name	Concentration	CAS#
Sodium Hydroxide	100%	1310-73-2

Section 3: Hazards Identification

Emergency Overview: Not available

Routes of Entry:

Skin Contact: Yes
Skin Absorption: Yes
Eye Contact: Yes
Inhalation: Yes
Ingestion: Yes

Potential Health Effects:

Skin:	Severe burning, frequently deep ulcerations and ultimate scarring. Destructive effect on tissues. Contact with dust or mist can cause multiple burns with temporary loss of hair at burn site. Solutions of up to 4% in water may not cause irritation or burning for several hours, while 25 - 50% solutions can cause these effects in less than three minutes.
Eye:	Extremely corrosive to the eyes. Can penetrate deeply, causing severe burns, corneal scarring, and clouding. In severe cases, glaucoma, cataracts, and permanent blindness may occur.
Inhalation:	Severe irritation of the respiratory tract, inflammation of lungs, difficulty breathing. May cause pulmonary edema.
Ingestion:	Will cause severe burning of mouth, throat, and esophagus; vomiting, diarrhea, and swelling of larynx and subsequent suffocation. Perforation of the gastrointestinal tract can occur.

Section 4: First Aid Measures

Eye Contact:	Immediately flush the contaminated eyes with lukewarm, gently flowing water for a minimum of 20 minutes, but preferably longer, holding the eyelids open. Take care not to rinse contaminated water into the non-affected eye. If irritation persists, repeat flushing. Obtain medical attention immediately.
Skin Contact:	Immediately flush with water for 15 minutes, or until feeling of slipperiness disappears. Seek medical attention.
Inhalation:	Remove patient to fresh air. If breathing has stopped, administer artificial respiration. If breathing is difficult, administer oxygen. Seek medical attention.
Ingestion:	DO NOT induce vomiting. Give one cup of water to drink, in order to dilute material in stomach. If vomiting occurs naturally, repeat administration of water. Seek immediate medical attention.
Other First Aid:	Not available

Section 5: Fire Fighting Measures

Conditions Of Flammability:	None known.
Extinguishing Media:	Dry chemical, CO ₂ , foam, water
Flashpoint:	Not available
Upper Flammable Limit:	Not available
Lower Flammable Limit:	Not available
Autoignition Temperature:	Not available
Protective Equipment:	Firefighters must wear appropriate breathing apparatus and clothing.

Sensitivity To Impact or Static Discharge: Not available

Hazardous Combustion Products: None known.

Fire Comment:

Section 6: Accidental Release Measures

Personnel Precautions: Use proper personal protective equipment as listed in section 8.

Spill Cleanup Measures: Restrict access to area. Wear appropriate protective gear. Contain spill. Do not allow to enter waterways. Neutralize the final traces and flush area with water. Spilled solutions should be contained by diking with inert material, such as sand or earth.

Section 7: Handling & Storage

Handling: Avoid all contact with product. When diluting solution or dissolving, add caustic to water in small amounts, avoiding boiling and splattering.

Storage: Store in a cool, dry, well ventilated place. Keep container tightly closed and away from incompatible materials.

Section 8: Exposure Controls, Personal Protection, Exposure Guidelines

Engineering Controls: Provide mechanical ventilation to prevent dust concentrations, and to reduce potential exposure.

Personal Protective Equipment: Impervious clothing is necessary, including gloves and boots. Goggles and faceshield required.

Respiratory Protection: In absence of proper ventilation, recommended NIOSH-approved dust respirator.

Exposure Limits: ACGIH TLV = 2mg/m³

Chemical Name	ACGIH TLV-TWA	OSHA PEL-TWA
Sodium Hydroxide	2 mg/m ³	2 mg/m ³

Section 9: Physical & Chemical Properties

Physical State:	Solid
Odour And Appearance:	White bead or flake; odourless
Odour Threshold:	Not available
Boiling Point:	1390°C
Evaporation Rate:	Not available
Melting Point:	318°C
Freezing Point:	Not available
Specific Gravity:	2.13 g/cc
Solubility in Water:	Complete
Vapour Density:	Not available
Vapour Pressure:	80 mbarr @ 1057°C
pH:	13, strong alkali
Flash Point:	Not available
Volatility (% by volume):	Not available
Coefficient of Water to Oil distribution:	Not available

Section 10: Stability & Reactivity

Chemical Stability:	Yes
Hazardous Polymerization:	Will not occur.
Conditions Of Chemical Instability:	
Incompatible Substances:	Strong Acids: May react violently. Water: Reaction may generate enough heat to ignite combustible materials. Metals: (Aluminum and Zinc) Reaction may produce flammable and explosive hydrogen gas. Organohalogen Compounds: May react to form spontaneously combustible compounds. Nitro and Chloro Organic Compounds: may react explosively. Reducing Sugars and Dry Whey Solids: Fructose, galactose, arabinose, levulose, lactose, maltose, as well as dry whey solids may react with alkaline solutions to form possibly lethal concentrations of Carbon Monoxide.
Special Decomposition Products:	Carbon monoxide

Section 11: Toxicological Information

Chemical Name	LD ₅₀ (Oral Rat)	LD ₅₀ (Dermal Rabbit)	LC ₅₀ (Inhalation Rat)
Sodium Hydroxide	Not Available	500 mg/kg	Not Available

Effects Of Acute Exposure: Will burn contact area.

Effects Of Chronic Exposure: None known.

General Irritancy Of Product: Not available

Sensitization: Not available

Carcinogenicity: Not available

Reproductive Toxicity: Not available

Teratogenicity: Not available

Embryotoxicity: Not Available

Mutagenicity: Not available

Synergistic Products: Not available

Section 12: Ecological Information

Ecotoxicity: Not Available

Environmental Fate: Not Available

Section 13: Disposal Considerations

Waste Disposal: All waste should be disposed of according to federal, provincial and local regulations. Containers should NOT be re-used. Containers should be disposed of in accordance with government regulations.

Section 14: Transport Information

TDG Classification: 8 / Packaging Group II



DOT UN Number: UN 1823

Shipping Notes: Secure containers (full and/or empty) with suitable hold-down devices during shipment.

Ship as per transportation of dangerous goods regulations.

Section 15: Regulatory Information

Workplace Hazardous Materials Information Systems Data (WHMIS):

	Class ID	Class	Workplace Hazard
	D-1-B	Materials Causing Immediate/Serious Toxic Effects - Toxic	Immediate serious toxic effects
	E	Corrosive Materials	Corrosive

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

Section 16: Additional Information

MSDS Revision Date: March 24, 2010

MSDS Revision Notes:


MSDS Author: Bri-Chem Supply Ltd.

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Section 1: Product & Company Information

Product Name: Citric Acid
Chemical Family: Organic Acid
Product Use: Drilling Mud Additive

Workplace Hazardous Materials Information Systems Data (WHMIS):

	Class ID	Class	Workplace Hazard
	D-2-B	Materials Causing Other Toxic Effects - Toxic	Skin and eye irritant

Manufacturer Name: Bri-Chem Supply Ltd.
Address: 2125, 64th Avenue, Edmonton, AB T6P 1Z4 Canada
General Phone Number: (780) 455-8667
General Fax Number: (780) 451-4420
MSDS Revision Date: March 24, 2010
Supercedes: January 1, 2008
Prepared By: Bri-Chem Supply Ltd.
Preparer's Phone: (780) 455-8667

Section 2: Composition/Information on Ingredients

Chemical Name	Concentration	CAS#
Citric Acid	100%	77-92-9

Section 3: Hazards Identification

Emergency Overview: Not Available

Routes of Entry:

Skin Contact: Yes
Skin Absorption: No
Eye Contact: No
Inhalation: No
Ingestion: Yes

Potential Health Effects:

Skin:	May cause irritation.
Eye:	May cause irritation.
Inhalation:	Nuisance dust
Ingestion:	May cause irritation of mucous membranes and gastrointestinal tract.

Section 4: First Aid Measures

Eye Contact:	Flush eyes with water for at least 15 minutes. If adverse symptoms develop, seek medical attention.
Skin Contact:	Wash with soap and water. If adverse symptoms develop, seek medical attention.
Inhalation:	Remove patient to fresh air. If breathing has stopped, administer artificial respiration, and seek medical attention.
Ingestion:	Give patient large quantities of water or milk to drink, then induce vomiting. Contact a physician.
Other First Aid:	Not Available

Section 5: Fire Fighting Measures

Conditions Of Flammability:	Non-flammable
Extinguishing Media:	Dry chemical, CO ₂ , foam, water
Flashpoint:	Not Available
Upper Flammable Limit:	2294g/m ³
Lower Flammable Limit:	282.4g/m ³
Autoignition Temperature:	1000-1020°C
Protective Equipment:	Firefighters must wear appropriate breathing apparatus and clothing.
Sensitivity To Impact or Static Discharge:	Not available
Hazardous Combustion Products:	Not available
Fire Comment:	

Section 6: Accidental Release Measures

Personnel Precautions:	Use proper personal protective equipment as listed in section 8.
Spill Cleanup Measures:	Contain spill. Pick up solids and place in tightly sealed container.

Section 7: Handling & Storage

Handling: Avoid ingestion. Practice reasonable caution and personal cleanliness. Avoid skin and eye contact.

Storage: Store in a cool, dry, well ventilated place. Keep container tightly closed and away from incompatible materials.

Section 8: Exposure Controls, Personal Protection, Exposure Guidelines

Engineering Controls: Provide mechanical ventilation to prevent dust concentrations, and to reduce potential exposure.

Personal Protective Equipment: Chemical-resistant clothing is recommended, including gloves, apron, and goggles.

Respiratory Protection: In absence of proper ventilation, it is recommended to wear an approved dust mask.

Exposure Limits: LD₅₀(oral mouse)=5040 mg/kg LD₅₀(oral rat)= 6730-11700 mg/kg Dermal, acute: 500mg/24 hr-moderate Eye: 750 mg/24 hr severe

Chemical Name	ACGIH TLV-TWA	OSHA PEL-TWA
Citric Acid	Not Available	Not Available

Section 9: Physical & Chemical Properties

Physical State: Solid

Odour And Appearance: White powder or granules; odourless

Odour Threshold: N/A

Boiling Point: N/A

Evaporation Rate: < 1

Melting Point: 153°C

Freezing Point: N/A

Specific Gravity: 1.665

Solubility in Water: 60% @ 20C

Vapour Density: N/A

Vapour Pressure: N/A

pH: 2.2

Flash Point: Not Available

Volatility (% by volume): Not available

Coefficient of Water to Oil distribution: N/A

Section 10: Stability & Reactivity

Chemical Stability:	Yes
Hazardous Polymerization:	Will not occur.
Conditions Of Chemical Instability:	
Incompatible Substances:	Incompatible with copper, zinc, aluminum, and their alloys, due to corrosion. Avoid contact with metal nitrates and strong oxidizers.
Special Decomposition Products:	CO, CO ₂

Section 11: Toxicological Information

Chemical Name	LD ₅₀ (Oral Rat)	LD ₅₀ (Dermal Rabbit)	LC ₅₀ (Inhalation Rat)
Citric Acid	6730 mg/kg	Not Available	Not Available

Effects Of Acute Exposure:	N/A
Effects Of Chronic Exposure:	Irritation
General Irritancy Of Product:	Slight
Sensitization:	N/A
Carcinogenicity:	N/A
Reproductive Toxicity:	N/A
Teratogenicity:	N/A
Embryotoxicity:	Not Available
Mutagenicity:	N/A
Synergistic Products:	N/A

Section 12: Ecological Information

Ecotoxicity:	Not Available
Environmental Fate:	Not Available

Section 13: Disposal Considerations

Waste Disposal:	All waste should be disposed of according to federal, provincial and local regulations. Containers should NOT be re-used. Containers should be disposed of in accordance with government regulations.
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Section 14: Transport Information


TDG Classification: Not regulated

DOT UN Number: N/A

Shipping Notes: Not available

Section 15: Regulatory Information

Workplace Hazardous Materials Information Systems Data (WHMIS):

	Class ID	Class	Workplace Hazard
	D-2-B	Materials Causing Other Toxic Effects - Toxic	Skin and eye irritant

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

Section 16: Additional Information

MSDS Revision Date: March 24, 2010

MSDS Revision Notes:


MSDS Author: Bri-Chem Supply Ltd.

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Section 1: Product & Company Information

Product Name: Drispac
Chemical Family: Cellulosic polymer
Product Use: Drilling Fluid Additive

Workplace Hazardous Materials Information Systems Data (WHMIS):

	Class ID	Class	Workplace Hazard
	None	Not a Controlled Product	

Manufacturer Name: Bri-Chem Supply Ltd.
Address: 2125, 64th Avenue, Edmonton, AB T6P 1Z4 Canada
General Phone Number: (780) 455-8667
General Fax Number: (780) 451-4420
MSDS Revision Date: March 24, 2010
Supercedes: January 1, 2008
Prepared By: Bri-Chem Supply Ltd.
Preparer's Phone: (780) 455-8667

Section 2: Composition/Information on Ingredients

Chemical Name	Concentration	CAS#
No Hazardous Ingredients		

Section 3: Hazards Identification

Emergency Overview: None known.

Routes of Entry:

Skin Contact: Yes
Skin Absorption: No
Eye Contact: Yes
Inhalation: Yes
Ingestion: Yes

Potential Health Effects:

Skin:	Prolonged contact with moistened product may cause slight irritation.
Eye:	Dust may produce mechanical irritation.
Inhalation:	Non-irritating to mucous membranes, however breathing high concentrations of the dust may cause mechanical irritation of the nose, throat, and upper respiratory tract.
Ingestion:	Passes through relatively inert. May cause gastrointestinal upset.

Section 4: First Aid Measures

Eye Contact:	Flush eyes with running water. If irritation or adverse symptoms develop, seek medical attention.
Skin Contact:	Wash skin with soap and water. If irritation or adverse symptoms develop, seek medical attention.
Inhalation:	Remove from exposure. If illness or adverse symptoms develop, seek medical attention
Ingestion:	If illness or adverse symptoms develop, seek medical attention.
Other First Aid:	None known.

Section 5: Fire Fighting Measures

Conditions Of Flammability:	None
Extinguishing Media:	Dry chemical, CO ₂ , foam, water fog
Flashpoint:	Not Applicable
Upper Flammable Limit:	Not Determined
Lower Flammable Limit:	Not Determined
Autoignition Temperature:	Not Applicable
Protective Equipment:	Firefighters must wear appropriate breathing apparatus and clothing.
Sensitivity To Impact or Static Discharge:	Dust in sufficient concentration can result in an explosive mixture in air.
Hazardous Combustion Products:	Carbon oxides and various hydrocarbons formed when burned.
Fire Comment:	

Section 6: Accidental Release Measures

- Personnel Precautions:** Use proper personal protective equipment as listed in section 8.
- Spill Cleanup Measures:** Use appropriate safety equipment. Small spills, sweep up and put into approved DOT containers for disposal or re-use. Large spills, do not allow to enter waterways, sweep or shovel into approved DOT containers for re-use or disposal.

Section 7: Handling & Storage

- Handling:** Avoid ingestion. Practice reasonable caution and personal cleanliness. Avoid skin and eye contact.
- Storage:** Store in a cool, dry, well ventilated place. Keep container tightly closed and away from incompatible materials.

Section 8: Exposure Controls, Personal Protection, Exposure Guidelines

- Engineering Controls:** Provide mechanical ventilation to prevent dust concentrations and reduce potential exposure.
- Personal Protective Equipment:** Chemical-resistant clothing is recommended, including gloves, apron, and goggles.
- Respiratory Protection:** Recommend NIOSH-approved dust respirator.
- Exposure Limits:** Not Determined

Chemical Name	ACGIH TLV-TWA	OSHA PEL-TWA
No Hazardous Ingredients		

Section 9: Physical & Chemical Properties

- Physical State:** Solid
- Odour And Appearance:** Light powder; odourless
- Odour Threshold:** Not Applicable
- Boiling Point:** Not Applicable
- Evaporation Rate:** Not Applicable
- Melting Point:** Not Applicable
- Freezing Point:** Not Applicable
- Specific Gravity:** Not Available
- Solubility in Water:** Complete

Vapour Density:	Not Applicable
Vapour Pressure:	Not Applicable
pH:	Not Applicable
Flash Point:	Not Applicable
Volatility (% by volume):	Negligible
Coefficient of Water to Oil distribution:	Not Applicable

Section 10: Stability & Reactivity

Chemical Stability:	Yes
Hazardous Polymerization:	Will not occur.
Conditions Of Chemical Instability:	
Incompatible Substances:	Not Determined
Special Decomposition Products:	Not Determined

Section 11: Toxicological Information

Chemical Name	LD ₅₀ (Oral Rat)	LD ₅₀ (Dermal Rabbit)	LC ₅₀ (Inhalation Rat)
No Hazardous Ingredients			

Effects Of Acute Exposure:	Not Determined
Effects Of Chronic Exposure:	No adverse effects have been noted in chronic feeding studies using lab animals and humans.
General Irritancy Of Product:	None known
Sensitization:	Not Determined
Carcinogenicity:	Not Applicable
Reproductive Toxicity:	Not Applicable
Teratogenicity:	Not Applicable
Embryotoxicity:	Not Available
Mutagenicity:	Not Applicable
Synergistic Products:	Not Applicable

Section 12: Ecological Information

Ecotoxicity:	Not Available
Environmental Fate:	Not Available

Section 13: Disposal Considerations

Waste Disposal: All waste should be disposed of according to federal, provincial and local regulations. Containers should NOT be re-used. Containers should be disposed of in accordance with government regulations.

Section 14: Transport Information

TDG Classification: Not Regulated
DOT UN Number: Not Regulated
Shipping Notes: No special requirements

Section 15: Regulatory Information

Workplace Hazardous Materials Information Systems Data (WHMIS):

	Class ID	Class	Workplace Hazard
	None	Not a Controlled Product	

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

Section 16: Additional Information


MSDS Revision Date: March 24, 2010
MSDS Revision Notes:
MSDS Author: Bri-Chem Supply Ltd.

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Section 1: Product & Company Information

Product Name: Kelzan XCD
Chemical Family: Xanthan Gum
Product Use: Rheology control in drilling fluids

Workplace Hazardous Materials Information Systems Data (WHMIS):

	Class ID	Class	Workplace Hazard
	None	Not a Controlled Product	

Manufacturer Name: Bri-Chem Supply Ltd.
Address: 2125, 64th Avenue, Edmonton, AB T6P 1Z4 Canada
General Phone Number: (780) 455-8667
General Fax Number: (780) 451-4420
MSDS Revision Date: March 24, 2010
Supercedes: January 1, 2008
Prepared By: Bri-Chem Supply Ltd.
Preparer's Phone: (780) 455-8667

Section 2: Composition/Information on Ingredients

Chemical Name	Concentration	CAS#
Xanthan Gum	100%	11138-66-2

Section 3: Hazards Identification

Emergency Overview: No specific measures required.

Routes of Entry:

Skin Contact: Yes
Skin Absorption: No
Eye Contact: No
Inhalation: Yes
Ingestion: No

Potential Health Effects:

Skin:	N/A
Eye:	N/A
Inhalation:	Inhalation of dust may cause coughing and sneezing.
Ingestion:	N/A

Section 4: First Aid Measures

Eye Contact:	Flush eyes with running water for at least 15 minutes. Seek medical attention.
Skin Contact:	Wash with soap and water. If adverse symptoms develop, seek medical attention.
Inhalation:	Move patient to fresh air. Treat symptomatically.
Ingestion:	Essentially non-toxic
Other First Aid:	No specific measures required.

Section 5: Fire Fighting Measures

Conditions Of Flammability:	Non-flammable
Extinguishing Media:	Dry chemical, CO ₂ , foam, water
Flashpoint:	N/A
Upper Flammable Limit:	N/A
Lower Flammable Limit:	N/A
Autoignition Temperature:	N/A
Protective Equipment:	Firefighters must wear appropriate breathing apparatus and clothing.
Sensitivity To Impact or Static Discharge:	N/A
Hazardous Combustion Products:	Combustible dust
Fire Comment:	

Section 6: Accidental Release Measures

Personnel Precautions:	Use proper personal protective equipment as listed in section 8.
Spill Cleanup Measures:	Use appropriate safety equipment. Small spills, sweep up and put into approved DOT containers for disposal or re-use. Large spills, do not allow to enter waterways, sweep or shovel into approved DOT containers for re-use or disposal.

Section 7: Handling & Storage

Handling: Avoid ingestion. Practice reasonable caution and personal cleanliness. Avoid skin and eye contact.

Storage: Store in a cool, dry, well ventilated place. Keep container tightly closed and away from incompatible materials.

Section 8: Exposure Controls, Personal Protection, Exposure Guidelines

Engineering Controls: Provide mechanical ventilation to prevent dust concentrations, and to reduce potential exposure.

Personal Protective Equipment: Chemical-resistant clothing is recommended, including gloves, apron, and goggles.

Respiratory Protection: Recommend NIOSH-approved dust respirator.

Exposure Limits: N/A

Chemical Name	ACGIH TLV-TWA	OSHA PEL-TWA
Xanthan Gum	Not Applicable	Not Applicable

Section 9: Physical & Chemical Properties

Physical State: Solid

Odour And Appearance: White - tan powder; slight odour

Odour Threshold: Slight

Boiling Point: N/A

Evaporation Rate: N/A

Melting Point: N/A

Freezing Point: N/A

Specific Gravity: Not available

Solubility in Water: Complete

Vapour Density: N/A

Vapour Pressure: N/A

pH: N/A

Flash Point: N/A

Volatility (% by volume): N/A

Coefficient of Water to Oil distribution: N/A

Section 10: Stability & Reactivity

Chemical Stability:	Yes
Hazardous Polymerization:	Will not occur.
Conditions Of Chemical Instability:	
Incompatible Substances:	Strong oxidants
Special Decomposition Products:	Carbon dioxide (CO ₂), carbon monoxide (CO)

Section 11: Toxicological Information

Chemical Name	LD ₅₀ (Oral Rat)	LD ₅₀ (Dermal Rabbit)	LC ₅₀ (Inhalation Rat)
Xanthan Gum	Not Applicable	Not Applicable	Not Applicable

Effects Of Acute Exposure:	N/A
Effects Of Chronic Exposure:	N/A
General Irritancy Of Product:	None known.
Sensitization:	N/A
Carcinogenicity:	N/A
Reproductive Toxicity:	N/A
Teratogenicity:	N/A
Embryotoxicity:	Not Available
Mutagenicity:	N/A
Synergistic Products:	N/A

Section 12: Ecological Information

Ecotoxicity:	Not Available
Environmental Fate:	Not Available

Section 13: Disposal Considerations

Waste Disposal:	All waste should be disposed of according to federal, provincial and local regulations. Containers should NOT be re-used. Containers should be disposed of in accordance with government regulations.
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Section 14: Transport Information

TDG Classification: Not regulated
DOT UN Number: Not regulated
Shipping Notes: No special requirements

Section 15: Regulatory Information

Workplace Hazardous Materials Information Systems Data (WHMIS):

	Class ID	Class	Workplace Hazard
	None	Not a Controlled Product	

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

Section 16: Additional Information



MSDS Revision Date: March 24, 2010
MSDS Revision Notes:
MSDS Author: Bri-Chem Supply Ltd.

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Section 1: Product & Company Information

Product Name: Lime
Chemical Family: Calcium Hydroxide
Product Use: Drilling Fluid Additive

Workplace Hazardous Materials Information Systems Data (WHMIS):

	Class ID	Class	Workplace Hazard
	D-2-A	Materials Causing Other Toxic Effects - Very Toxic	Toxic effects
	E	Corrosive Materials	Corrosive

Manufacturer Name: Bri-Chem Supply Ltd.
Address: 2125, 64th Avenue, Edmonton, AB T6P 1Z4 Canada
General Phone Number: (780) 455-8667
General Fax Number: (780) 451-4420
MSDS Revision Date: March 24, 2010
Supercedes: January 1, 2008
Prepared By: Bri-Chem Supply Ltd.
Preparer's Phone: (780) 455-8667

Section 2: Composition/Information on Ingredients

Chemical Name	Concentration	CAS#
Crystalline Silica, Quartz	>0.1 %	14808-60-7
Calcium Hydroxide	>92 %	1305-62-0

Section 3: Hazards Identification

Emergency Overview: Consult a physician for all exposures, except minor instances of inhalation.

Routes of Entry:

Skin Contact: Yes
Skin Absorption: No
Eye Contact: Yes
Inhalation: Yes
Ingestion: Yes

Potential Health Effects:

Skin:	Mucous and skin corrosion. Removes skin oils.
Eye:	Severe eye irritation, intense watering of eyes, possible lesions, possible blindness when exposed for prolonged period.
Inhalation:	Irritation of breathing passages, coughing
Ingestion:	Pain, vomiting blood, diarrhea, drop in blood pressure (indicates perforation of esophagus or stomach)

Section 4: First Aid Measures

Eye Contact:	Immediately rinse eyes with lukewarm water for at least 15 minutes. Seek immediate medical attention.
Skin Contact:	Carefully and gently brush the contaminated body surfaces in order to remove all traces of lime. Remove contaminated clothing. Rinse contaminated area with lukewarm water for 15 minutes. If adverse symptoms develop seek medical attention.
Inhalation:	Remove patient to fresh air. If breathing has stopped, administer artificial respiration, and seek medical attention.
Ingestion:	DO NOT induce vomiting. If patient is conscious, give 10 ounces of water to drink, followed by diluted vinegar (1 part vinegar:2 parts water) or fruit juice to neutralise the alkali. Seek immediate medical attention.
Other First Aid:	Consult a physician for all exposures, except minor instances of inhalation.

Section 5: Fire Fighting Measures

Conditions Of Flammability:	Non-flammable
Extinguishing Media:	Dry chemical, carbon dioxide, foam, water
Flashpoint:	Not Applicable
Upper Flammable Limit:	Not Applicable
Lower Flammable Limit:	Not Applicable
Autoignition Temperature:	Not Available
Protective Equipment:	Firefighters must wear appropriate breathing apparatus and clothing.
Sensitivity To Impact or Static Discharge:	Not Applicable
Hazardous Combustion Products:	Not Determined
Fire Comment:	Not Available

Section 6: Accidental Release Measures

Personnel Precautions: Use proper personal protective equipment as listed in section 8.

Spill Cleanup Measures: Use appropriate safety equipment. Small spills, sweep up and put into approved DOT containers for disposal or re-use. Large spills, do not allow to enter waterways, sweep or shovel into approved DOT containers for re-use or disposal.

Section 7: Handling & Storage

Handling: Avoid ingestion. Practice reasonable caution and personal cleanliness. Avoid skin and eye contact.

Storage: Store in a cool, dry, well ventilated place. Keep container tightly closed and away from incompatible materials.

Section 8: Exposure Controls, Personal Protection, Exposure Guidelines

Engineering Controls: Provide mechanical ventilation to prevent dust concentrations, and to reduce potential exposure.

Personal Protective Equipment: Chemical-resistant clothing is recommended, including gloves, apron, and goggles.

Respiratory Protection: Recommend NIOSH-approved dust respirator.

Exposure Limits: Not Determined

Chemical Name	ACGIH TLV-TWA	OSHA PEL-TWA
Crystalline Silica, Quartz	0.05 mg/m ³	0.1 mg/m ³
Calcium Hydroxide	5 (TWA) 8/40h	5 (TWA) 8/40h

Section 9: Physical & Chemical Properties

Physical State: Solid

Odour And Appearance: Fine white powder; odourless

Odour Threshold: Not Applicable

Boiling Point: Not Applicable

Evaporation Rate: Not Applicable

Melting Point: Not Applicable

Freezing Point: Not Applicable

Specific Gravity: 2.3-2.4

Solubility in Water: Soluble

Vapour Density:	Not Applicable
Vapour Pressure:	Not Applicable
pH:	12.45
Flash Point:	Not Applicable
Volatility (% by volume):	Not Applicable
Coefficient of Water to Oil distribution:	Not Applicable

Section 10: Stability & Reactivity

Chemical Stability:	No
Hazardous Polymerization:	Will not occur.
Conditions Of Chemical Instability:	Absorbs carbon dioxide in the air to form calcium carbonate.
Incompatible Substances:	Boron tri-flouride, chlorine tri-fluoride, ethanol, flourine,hydrogen flouride, phosphorus pentoxide, and acids. (violent reaction with generating heat and possible explosion in confined area)
Special Decomposition Products:	Thermal decomposition at 540°C will produce calcium oxide and water.

Section 11: Toxicological Information

Chemical Name	LD ₅₀ (Oral Rat)	LD ₅₀ (Dermal Rabbit)	LC ₅₀ (Inhalation Rat)
Crystalline Silica, Quartz	Not Available	Not Available	Not Available
Calcium Hydroxide	Not Available	Not Available	Not Available

Effects Of Acute Exposure:	Not Determined
Effects Of Chronic Exposure:	Contact dermatitis
General Irritancy Of Product:	Severe to moist tissues
Sensitization:	Not Determined
Carcinogenicity:	Lime could contain crystalline silica, a known carcinogen.
Reproductive Toxicity:	Not Applicable
Teratogenicity:	Not Applicable
Embryotoxicity:	Not Available
Mutagenicity:	Not Applicable
Synergistic Products:	Not Applicable

Section 12: Ecological Information

Ecotoxicity: Not Available

Environmental Fate: Not Available

Section 13: Disposal Considerations

Waste Disposal: All waste should be disposed of according to federal, provincial and local regulations. Containers should NOT be re-used. Containers should be disposed of in accordance with government regulations.

Section 14: Transport Information



TDG Classification: Not Regulated

DOT UN Number: Not Regulated

Shipping Notes: No special requirements

Section 15: Regulatory Information

Workplace Hazardous Materials Information Systems Data (WHMIS):

	Class ID	Class	Workplace Hazard
	D-2-A	Materials Causing Other Toxic Effects - Very Toxic	Toxic effects
	E	Corrosive Materials	Corrosive

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

Section 16: Additional Information

MSDS Revision Date: March 24, 2010

MSDS Revision Notes:


MSDS Author: Bri-Chem Supply Ltd.

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Section 1: Product & Company Information

Product Name: Nut Shell Medium
Chemical Family: Nut Shell - organic fibrous and blocky material
Product Use: Drilling Fluid Additive

Workplace Hazardous Materials Information Systems Data (WHMIS):

	Class ID	Class	Workplace Hazard
	None	Not a Controlled Product	

Manufacturer Name: Bri-Chem Supply Ltd.
Address: 2125, 64th Avenue, Edmonton, AB T6P 1Z4 Canada
General Phone Number: (780) 455-8667
General Fax Number: (780) 451-4420
MSDS Revision Date: March 24, 2010
Supercedes: January 1, 2008
Prepared By: Bri-Chem Supply Ltd.
Preparer's Phone: (780) 455-8667

Section 2: Composition/Information on Ingredients

Chemical Name	Concentration	CAS#
No Hazardous Ingredients		

Section 3: Hazards Identification

Emergency Overview: No specific measures required.

Routes of Entry:

Skin Contact: Yes
Skin Absorption: No
Eye Contact: No
Inhalation: No
Ingestion: No

Potential Health Effects:

Skin:	N/A
Eye:	N/A
Inhalation:	N/A
Ingestion:	N/A

Section 4: First Aid Measures

Eye Contact:	Flush eyes with running water for at least 15 minutes. If adverse symptoms develop, seek medical attention.
Skin Contact:	Wash with soap and water. If adverse symptoms develop, seek medical attention.
Inhalation:	Non-toxic
Ingestion:	Non-toxic
Other First Aid:	No specific measures required.

Section 5: Fire Fighting Measures

Conditions Of Flammability:	None known.
Extinguishing Media:	Dry chemical, CO ₂ , foam, water
Flashpoint:	149°C
Upper Flammable Limit:	243°C
Lower Flammable Limit:	Not available
Autoignition Temperature:	Not available
Protective Equipment:	Firefighters must wear appropriate breathing apparatus and clothing.
Sensitivity To Impact or Static Discharge:	None known.
Hazardous Combustion Products:	None known.
Fire Comment:	

Section 6: Accidental Release Measures

Personnel Precautions:	Use proper personal protective equipment as listed in section 8.
Spill Cleanup Measures:	Use appropriate safety equipment. Small spills, sweep up and put into approved DOT containers for disposal or re-use. Large spills, do not allow to enter waterways. Sweep or shovel into approved DOT containers for re-use or disposal.

Section 7: Handling & Storage

Handling: Avoid ingestion. Practice reasonable caution and personal cleanliness. Avoid skin and eye contact.

Storage: Store in a cool, dry, well ventilated place. Keep container tightly closed and away from incompatible materials.

Section 8: Exposure Controls, Personal Protection, Exposure Guidelines

Engineering Controls: Provide mechanical ventilation to prevent dust concentrations and reduce potential exposure.

Personal Protective Equipment: Chemical-resistant clothing is recommended, including gloves, apron, and goggles.

Respiratory Protection: Recommend NIOSH-approved dust respirator.

Exposure Limits: N/A

Chemical Name	ACGIH TLV-TWA	OSHA PEL-TWA
No Hazardous Ingredients		

Section 9: Physical & Chemical Properties

Physical State: Solid

Odour And Appearance: Light brown colour; odourless

Odour Threshold: N/A

Boiling Point: N/A

Evaporation Rate: N/A

Melting Point: N/A

Freezing Point: N/A

Specific Gravity: 2.2

Solubility in Water: Insoluble

Vapour Density: N/A

Vapour Pressure: N/A

pH: N/A

Flash Point: 149°C

Volatility (% by volume): N/A

Coefficient of Water to Oil distribution: N/A

Section 10: Stability & Reactivity

Chemical Stability:	Yes
Hazardous Polymerization:	Will not occur.
Conditions Of Chemical Instability:	
Incompatible Substances:	None known.
Special Decomposition Products:	None known.

Section 11: Toxicological Information

Chemical Name	LD ₅₀ (Oral Rat)	LD ₅₀ (Dermal Rabbit)	LC ₅₀ (Inhalation Rat)
No Hazardous Ingredients			

Effects Of Acute Exposure:	None known.
Effects Of Chronic Exposure:	None known.
General Irritancy Of Product:	N/A
Sensitization:	N/A
Carcinogenicity:	N/A
Reproductive Toxicity:	N/A
Teratogenicity:	N/A
Embryotoxicity:	Not Available
Mutagenicity:	N/A
Synergistic Products:	N/A

Section 12: Ecological Information

Ecotoxicity:	Not Available
Environmental Fate:	Not Available

Section 13: Disposal Considerations

Waste Disposal:	All waste should be disposed of according to federal, provincial and local regulations. Containers should NOT be re-used. Containers should be disposed of in accordance with government regulations.
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Section 14: Transport Information

TDG Classification: Not regulated
DOT UN Number: Not regulated
Shipping Notes: No special requirements

Section 15: Regulatory Information

Workplace Hazardous Materials Information Systems Data (WHMIS):

	Class ID	Class	Workplace Hazard
	None	Not a Controlled Product	

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

Section 16: Additional Information

MSDS Revision Date: March 24, 2010
MSDS Revision Notes:
MSDS Author: Bri-Chem Supply Ltd.

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Section 1: Product & Company Information

Product Name: Sawdust
Chemical Family: Wood By-Product
Product Use: LCM

Workplace Hazardous Materials Information Systems Data (WHMIS):

	Class ID	Class	Workplace Hazard
	None	Not a Controlled Product	

Manufacturer Name: Bri-Chem Supply Ltd.
Address: 2125, 64th Avenue, Edmonton, AB T6P 1Z4 Canada
General Phone Number: (780) 455-8667
General Fax Number: (780) 451-4420
MSDS Revision Date: March 24, 2010
Supercedes: January 1, 2008
Prepared By: Bri-Chem Supply Ltd.
Preparer's Phone: (780) 455-8667

Section 2: Composition/Information on Ingredients

Chemical Name	Concentration	CAS#
No Hazardous Ingredients		

Section 3: Hazards Identification

Emergency Overview: Seek medical attention if symptoms develop or persist.

Routes of Entry:

Skin Contact: Yes
Skin Absorption: No
Eye Contact: Yes
Inhalation: Yes
Ingestion: Yes

Potential Health Effects:

Skin:	May cause irritation to the skin.
Eye:	May cause irritation to the eyes.
Inhalation:	May cause irritation to respiratory system.
Ingestion:	May cause irritation to the throat.

Section 4: First Aid Measures

Eye Contact:	Flush with clear water for 15 minutes or until irritation subsides. If irritation persists, call physician.
Skin Contact:	Wash skin with soap and water.
Inhalation:	Remove patient to fresh air. If breathing has stopped, administer artificial respiration, and seek medical attention.
Ingestion:	Not an expected issue
Other First Aid:	Seek medical attention if symptoms develop or persist.

Section 5: Fire Fighting Measures

Conditions Of Flammability:	N/A
Extinguishing Media:	Carbon dioxide, dry powder, foam, water
Flashpoint:	N/A
Upper Flammable Limit:	N/A
Lower Flammable Limit:	N/A
Autoignition Temperature:	N/A
Protective Equipment:	Self-contained respirators required for firefighting personnel.
Sensitivity To Impact or Static Discharge:	N/A
Hazardous Combustion Products:	None
Fire Comment:	

Section 6: Accidental Release Measures

Personnel Precautions:	Use proper personal protective equipment as listed in section 8.
Spill Cleanup Measures:	Use appropriate safety equipment. Sweep up and collect uncontaminated material for repackaging. Sweep up and collect contaminated material for disposal. Avoid excessive production of dust.

Section 7: Handling & Storage

Handling: Wear appropriate protective equipment.

Storage: Store in a cool, dry, well ventilated area. Keep away from sources of ignition.

Section 8: Exposure Controls, Personal Protection, Exposure Guidelines

Engineering Controls: Suggest local mechanical exhaust.

Personal Protective Equipment: Suggest gloves to prevent skin contact. Suggest goggles. Ensure eyewash station and emergency shower are available.

Respiratory Protection: Suggest approved respirator.

Exposure Limits: N/A

Chemical Name	ACGIH TLV-TWA	OSHA PEL-TWA
No Hazardous Ingredients		

Section 9: Physical & Chemical Properties

Physical State:	Solid
Odour And Appearance:	Beige wood chips; pine odour
Odour Threshold:	Moderate
Boiling Point:	N/A
Evaporation Rate:	N/A
Melting Point:	N/A
Freezing Point:	N/A
Specific Gravity:	N/A
Solubility in Water:	Insoluble
Vapour Density:	N/A
Vapour Pressure:	N/A
pH:	N/A
Flash Point:	N/A
Volatility (% by volume):	N/A
Coefficient of Water to Oil distribution:	N/A

Section 10: Stability & Reactivity

Chemical Stability: Yes

Hazardous Polymerization: Will not occur.

Conditions Of Chemical Instability:

Incompatible Substances: Strong oxidizers

Special Decomposition Products: None

Section 11: Toxicological Information

Chemical Name	LD ₅₀ (Oral Rat)	LD ₅₀ (Dermal Rabbit)	LC ₅₀ (Inhalation Rat)
No Hazardous Ingredients			

Effects Of Acute Exposure: N/A

Effects Of Chronic Exposure: N/A

General Irritancy Of Product: N/A

Sensitization: N/A

Carcinogenicity: N/A

Reproductive Toxicity: N/A

Teratogenicity: N/A

Embryotoxicity: Not Available

Mutagenicity: N/A

Synergistic Products: N/A

Section 12: Ecological Information

Ecotoxicity: Not Available

Environmental Fate: Not Available

Section 13: Disposal Considerations

Waste Disposal: Dispose of in accordance with all laws and regulations. It is the responsibility of the user to determine if contaminated material meets hazardous waste requirements.

Section 14: Transport Information

TDG Classification: N/A

DOT UN Number: N/A

Shipping Notes: N/A

Section 15: Regulatory Information

Workplace Hazardous Materials Information Systems Data (WHMIS):

	Class ID	Class	Workplace Hazard
	None	Not a Controlled Product	

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

Section 16: Additional Information

MSDS Revision Date: March 24, 2010

MSDS Revision Notes:


MSDS Author: Bri-Chem Supply Ltd.

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Section 1: Product & Company Information

Product Name: Soda Ash
Chemical Family: Sodium Carbonate, anhydrous
Product Use: Drilling Mud Additive

Workplace Hazardous Materials Information Systems Data (WHMIS):

	Class ID	Class	Workplace Hazard
	D-2-B	Materials Causing Other Toxic Effects - Toxic	Skin and eye irritant

Manufacturer Name: Bri-Chem Supply Ltd.
Address: 2125, 64th Avenue, Edmonton, AB T6P 1Z4 Canada
General Phone Number: (780) 455-8667
General Fax Number: (780) 451-4420
MSDS Revision Date: March 24, 2010
Supercedes: January 1, 2008
Prepared By: Bri-Chem Supply Ltd.
Preparer's Phone: (780) 455-8667

Section 2: Composition/Information on Ingredients

Chemical Name	Concentration	CAS#
Sodium Carbonate	99.8%	497-19-8

Section 3: Hazards Identification

Emergency Overview:

NOTE TO PHYSICIANS: All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred. If burns result from overexposure, treat in the following manner: Ingestion: Treat asphyxia from glottal edema by maintaining an adequate airway. Shock. Maintain normal blood pressure by transfusion and by the administration of 5% dextrose in saline. If symptoms are severe and perforation of the stomach or esophagus is suspected, give nothing by mouth until endoscopic examination has been done. Maintain nutrition, give carbohydrate or hyperalimentary fluid intravenously. Give prednisolone, 2 mg/kd/d in divided doses for 10 days, to reduce progression of fibrocystic and hyaline lung disease. Esophageal stricture may require dilation.

Routes of Entry:

Skin Contact:	Yes
Skin Absorption:	No
Eye Contact:	Yes
Inhalation:	Yes
Ingestion:	No

Potential Health Effects:

Skin:	Prolonged exposure may cause irritation.
Eye:	May cause slight irritation and/or redness and burning.
Inhalation:	May cause some respiratory irritation.
Ingestion:	May cause nausea, vomiting, and diarrhea.

Section 4: First Aid Measures

Eye Contact:	Flush eyes with water for at least 15 minutes. If adverse symptoms develop, seek medical attention.
Skin Contact:	Wash with soap and water. If irritation develops or persists, seek medical attention. Contaminated clothing should be laundered before re-use.
Inhalation:	Remove patient to fresh air. If breathing has stopped, administer artificial respiration, and seek medical attention.
Ingestion:	If patient is conscious, give 2 to 4 glasses of water to drink. DO NOT induce vomiting. Seek medical attention. Do not give anything by mouth to an unconscious or convulsing person.
Other First Aid:	NOTE TO PHYSICIANS: All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred. If burns result from overexposure, treat in the following manner: Ingestion: Treat asphyxia from glottal edema by maintaining an adequate airway. Shock. Maintain normal blood pressure by transfusion and by the administration of 5% dextrose in saline. If symptoms are severe and perforation of the stomach or esophagus is suspected, give nothing by mouth until endoscopic examination has been done. Maintain nutrition, give carbohydrate or hyperalimentary fluid intravenously. Give prednisolone, 2 mg/kd/d in divided doses for 10 days, to reduce progression of fibrocystic and hyaline lung disease. Esophageal stricture may require dilation.

Section 5: Fire Fighting Measures

Conditions Of Flammability:	Product does not burn or support combustion.
Extinguishing Media:	Dry chemical, CO ₂ , foam, water
Flashpoint:	N/A
Upper Flammable Limit:	N/A
Lower Flammable Limit:	N/A
Autoignition Temperature:	N/A
Protective Equipment:	Firefighters must wear appropriate breathing apparatus and clothing.
Sensitivity To Impact or Static Discharge:	None known.
Hazardous Combustion Products:	Heating soda ash releases CO ₂ .
Fire Comment:	

Section 6: Accidental Release Measures

Personnel Precautions:	Use proper personal protective equipment as listed in section 8.
Spill Cleanup Measures:	Use appropriate safety equipment. Small spills, sweep up and put into approved DOT containers for disposal or re-use. Large spills, do not allow to enter waterways, sweep or shovel into approved DOT containers for re-use or disposal.

Section 7: Handling & Storage

Handling:	Avoid ingestion. Practice reasonable caution and personal cleanliness. Avoid skin and eye contact.
Storage:	Store in a cool, dry, well ventilated place. Keep container tightly closed and away from incompatible materials.

Section 8: Exposure Controls, Personal Protection, Exposure Guidelines

Engineering Controls: Provide mechanical ventilation to prevent dust concentrations, and to reduce potential exposure.

Personal Protective Equipment: Chemical-resistant clothing is recommended including gloves, apron, and goggles.

Respiratory Protection: Respiratory protection is not normally required. If use creates dust formations, then NIOSH-approved respirator with dust cartridge is recommended.

Exposure Limits: Nuisance particulate 10 mg/m³

Chemical Name	ACGIH TLV-TWA	OSHA PEL-TWA
Sodium Carbonate	Not Available	Not Available

Section 9: Physical & Chemical Properties

Physical State: Solid

Odour And Appearance: White powder; odourless

Odour Threshold: N/A

Boiling Point: Decomposes at 400°C

Evaporation Rate: N/A

Melting Point: 851°C

Freezing Point: N/A

Specific Gravity: 2.533 @ 20°C

Solubility in Water: 17 % solution at 20C

Vapour Density: N/A

Vapour Pressure: N/A

pH: 11.3 in 1% solution

Flash Point: N/A

Volatility (% by volume): N/A

Coefficient of Water to Oil distribution: Not available

Section 10: Stability & Reactivity

Chemical Stability:	Yes
Hazardous Polymerization:	Will not occur.
Conditions Of Chemical Instability:	N/A
Incompatible Substances:	Contact with acids will release CO ₂ gas. Can react violently with red hot aluminum metal, fluorine gas, lithium, and 2,4,6-trinitrotoluene. Simultaneous exposure of soda ash and lime dust in the presence of moisture can result in the formation of corrosive caustic soda, which may cause burns.
Special Decomposition Products:	Heating soda ash releases CO ₂ .

Section 11: Toxicological Information

Chemical Name	LD ₅₀ (Oral Rat)	LD ₅₀ (Dermal Rabbit)	LC ₅₀ (Inhalation Rat)
Sodium Carbonate	3160 mg/kg	2300 mg/m ³	Not Available

Effects Of Acute Exposure:	As above
Effects Of Chronic Exposure:	Excessive contact may produce "soda ulcers" on hands and perforation of the nasal septum. Sensitivity reactions may occur from prolonged and repeated exposure.
General Irritancy Of Product:	Moderate
Sensitization:	Not available
Carcinogenicity:	Not considered to be a carcinogen by IARC, NTP, and OSHA
Reproductive Toxicity:	Not available
Teratogenicity:	Not a known teratogen
Embryotoxicity:	Not Available
Mutagenicity:	Not a known mutagen
Synergistic Products:	Not available

Section 12: Ecological Information

Ecotoxicity:	Not Available
Environmental Fate:	Not Available

Section 13: Disposal Considerations


Waste Disposal: All waste should be disposed of according to federal, provincial and local regulations. It is the responsibility of the end-user to determine if material meets criteria for hazardous waste at the time of disposal. Containers should NOT be re-used. Containers should be disposed of in accordance with government regulations.

Section 14: Transport Information

TDG Classification: Not regulated
DOT UN Number: N/A
Shipping Notes: No special requirements

Section 15: Regulatory Information

Workplace Hazardous Materials Information Systems Data (WHMIS):

	Class ID	Class	Workplace Hazard
	D-2-B	Materials Causing Other Toxic Effects - Toxic	Skin and eye irritant

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

Section 16: Additional Information

MSDS Revision Date: March 24, 2010
MSDS Revision Notes:
MSDS Author: Bri-Chem Supply Ltd.
Disclaimer:

This Health and Safety Information is correct to the best of our knowledge and belief at the date of its publication but we cannot accept liability for any loss, injury or damage which may result from its use. We shall ensure, so far as is reasonably practicable, that any revision of this Data Sheet is sent to all customers to whom we have directly supplied this substance, but must point out that it is the responsibility of any intermediate supplier to ensure that such revision is passed to the ultimate user. The information given in the Data Sheet is designed only as a guidance for safe handling, storage and the use of the substance. It is not a specification nor does it guarantee any specific properties. All chemicals should be handled only by competent personnel, within a controlled environment. Should further information be required, this can be obtained through the sales office whose address is at the top of this data sheet.