




Section 1: Product & Company Information

Product Name: Bleach
Chemical Family: Hypochlorous Acid Salt
Product Use: Drilling Fluid Additive

Workplace Hazardous Materials Information Systems Data (WHMIS):

	Class ID	Class	Workplace Hazard
	C	Oxidizing Materials	
	D-2-B	Materials Causing Other Toxic Effects - Toxic	Skin and eye irritant
	E	Corrosive Materials	Corrosive
	F	Dangerously Reactive Materials	

Manufacturer Name: HiTech Fluid Systems
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General Phone Number: (403)547-2906
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MSDS Revision Date: June 1, 2008
Supercedes: June 23, 2005
Prepared By: HiTech Fluid Systems
Preparer's Phone: (403)547-2906

Section 2: Composition/Information on Ingredients

Chemical Name	Concentration	CAS#
Sodium Hydroxide	0.1-0.5%	1310-73-2
Sodium Hypochlorite	5.4-13.2%	7681-52-9
Sodium Chloride	4-12%	1310-73-2

Section 3: Hazards Identification

Emergency Overview: In all cases, seek immediate medical attention.

Routes of Entry:

Skin Contact: Yes

Skin Absorption: No

Eye Contact: Yes

Inhalation: Yes

Ingestion: Yes

Potential Health Effects:

Skin: Causes severe skin irritation with blistering and ulceration.

Eye: Causes severe irritation of the mucous membranes of the eyes. May cause severe eye damage.

Inhalation: Irritant of the nose and throat causing coughing, difficulty breathing, and pulmonary edema.

Ingestion: Burning in the mouth and throat, abdominal cramps, nausea, vomiting, diarrhea, shock. May lead to convulsions, coma, and death.

Section 4: First Aid Measures

Eye Contact: Flush immediately with water for at least 20 minutes. Forcibly hold the eyelids apart to ensure complete irrigation of eye tissue. Seek immediate medical attention.

Skin Contact: Remove contaminated clothing, irrigate infected area with water for at least 20 minutes. Seek immediate medical attention.

Inhalation: Remove patient to fresh air. Administer artificial respiration only if breathing has stopped. If breathing is difficult, administer oxygen. Seek medical attention.

Ingestion: DO NOT induce vomiting. If vomiting occurs naturally, lean patient forward to prevent aspiration. Give large amounts of water. Do not give anything by mouth to an unconscious or convulsing person. Seek immediate medical attention.

Other First Aid: In all cases, seek immediate medical attention.

Section 5: Fire Fighting Measures

Conditions Of Flammability:	Non-combustible
Extinguishing Media:	Dry chemical, CO ₂ , 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 Available
Hazardous Combustion Products:	Chlorine gas, hydrogen gas
Fire Comment:	

Section 6: Accidental Release Measures

Personnel Precautions:	Use proper personal protective equipment as listed in section 8.
Spill Cleanup Measures:	Small spills, soak up with absorbent material. Large spills, dike to contain spill to prevent water pollution. Extremely slippery when wet. Return recovered material to plant.

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: None established. Chlorine TLV +1ppm.

Chemical Name	ACGIH TLV-TWA	OSHA PEL-TWA
Sodium Hydroxide	2 mg/m ³	2 mg/m ³
Sodium Hypochlorite	Not Available	Not Available
Sodium Chloride	Not Available	Not Available

Section 9: Physical & Chemical Properties

Physical State:	Liquid
Odour And Appearance:	Clear greenish-yellow liquid; strong chlorine odour
Odour Threshold:	Not Available
Boiling Point:	110°C for 15% solution
Evaporation Rate:	Not Available
Melting Point:	Not Available
Freezing Point:	-15°C
Specific Gravity:	1.17
Solubility in Water:	Soluble
Vapour Density:	Not Available
Vapour Pressure:	12.1 mm Hg @ 20°C
pH:	>12
Flash Point:	Not Applicable
Volatility (% by volume):	Not Available
Coefficient of Water to Oil distribution:	Not Available

Section 10: Stability & Reactivity

Chemical Stability:	No
Hazardous Polymerization:	Will not occur.
Conditions Of Chemical Instability:	Unstable at temperatures above 40°C, in sunlight, and in contact with acid.
Incompatible Substances:	Strong acids, ammonia, oxidizable materials, nickel, copper, tin, manganese, and iron.
Special Decomposition Products:	Chlorine gas, hydrogen gas

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
Sodium Hypochlorite	8910 mg/kg	Not Available	>10000 mg/m ³
Sodium Chloride	Not Available	Not Available	Not Available

Effects Of Acute Exposure:	If overexposed to the solution, there will be constant irritation to the eyes, nose, and throat.
Effects Of Chronic Exposure:	If overexposed to the solution, there will be constant irritation to the eyes, nose, and throat.
General Irritancy Of Product:	Severe
Sensitization:	Not Available
Carcinogenicity:	Not Applicable
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 (9.2)
DOT UN Number: UN1791
Shipping Notes: No special requirements

Section 15: Regulatory Information

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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: June 1, 2008

MSDS Revision Notes:

MSDS Author: HiTech Fluid Systems

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