



# MATERIAL SAFETY DATA SHEET

## 1. Product and Company Identification

**Material Name** B-10  
**Revision Date** 12/21/2011  
**Version #** 4  
**Product Use** High pH buffer.  
**Manufacturer / Supplier** FRAC TECH SERVICES LLC  
2500 HWY 62 West  
Chickasha, OK 73018  
US  
General information: 1-405-222-2300  
**Emergency** 24 Hour Emergency: INFOTRAC: 1-800-535-5053

## 2. Hazards Identification

**Physical State** Liquid.  
**Appearance** Colorless liquid.  
**Emergency Overview** DANGER!  
Causes skin and eye burns. Causes digestive tract burns. Mist or vapor irritating to eyes and respiratory tract.  
**OSHA regulatory status** This product is hazardous according to OSHA 29 CFR 1910.1200.  
**Routes of exposure** Inhalation. Ingestion. Eyes. Skin.  
**Eyes** Causes eye burns.  
**Skin** Causes skin burns.  
**Inhalation** Causes respiratory tract irritation.  
**Ingestion** Causes digestive tract burns.  
**Potential environmental effects** The product may affect the acidity (pH-factor) in water with risk of harmful effects to aquatic organisms.

## 3. Composition / Information on Ingredients

Components	CAS #	Percent
Potassium carbonate	584-08-7	30 - 48
Potassium hydroxide	1310-58-3	5 - 20

**Composition comments** All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

## 4. First Aid Measures

### First aid procedures

**Eye Contact** Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Call a physician or poison control center immediately. In case of irritation from airborne exposure, move to fresh air. Get medical attention if symptoms persist.

**Skin Contact** Rinse with BioNeut and/or immediately flush with plenty of water and soap for at least 15 minutes while removing contaminated clothing and shoes. Call a physician or poison control center immediately. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.

**Inhalation** Move to fresh air. Treat symptomatically. Get medical attention if symptoms persist.

**Ingestion** Call a physician or poison control center immediately. DO NOT induce vomiting. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person. If vomiting occurs, keep head lower than the hips to help prevent aspiration.

Notes to physician Not available.

## 5. Fire Fighting Measures

**Flammable Properties** No unusual fire or explosion hazards noted.

### Extinguishing media

**Suitable extinguishing media** No unusual fire or explosion hazards noted.

**Unsuitable extinguishing media** Not available.

**Specific Hazards arising from the Chemical** Not available.

**Firefighting equipment / instructions** Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

**Specific Methods** Not available.

**Hazardous combustion products** Carbon oxides.

## 6. Accidental Release Measures

**Personal precautions** Wear appropriate personal protective equipment (See Section 8).

**Methods for cleaning up** Absorb spill with vermiculite or other inert material, then place in a container for chemical waste for proper disposal.

Large Spills: Flush area with water. Prevent runoff from entering drains, sewers, or streams. Dike for later disposal.

## 7. Handling and Storage

**Handling** Do not get in eyes, on skin, on clothing. Avoid breathing material. Do not taste or swallow. Use only with adequate ventilation. Wash thoroughly after handling.

**Storage** Keep container tightly closed. Store away from incompatible materials, such as acids (See Section 10).

## 8. Exposure Controls / Personal Protection

### Occupational exposure limits

#### US. ACGIH Threshold Limit Values

Components	TWA		STEL	
	ppm	mg/m3	ppm	mg/m3
Potassium carbonate	Not available.	Not available.	Not available.	Not available.
Potassium hydroxide	Not available.	2	Not available.	Not available.

#### US. OSHA Table Z-1 Limits for Air Contaminates (29 CFR 1910.1000)

Components	PEL	
	ppm	mg/m3
Potassium carbonate	Not available.	Not available.
Potassium hydroxide	Not available.	Not available.

**Canada. Alberta OELs (Occupational Health Safety Code, Schedule 1, Table 2)**

Components	TWA		STEL	
	ppm	mg/m3	ppm	mg/m3
Potassium carbonate	Not available.	Not available.	Not available.	Not available.
Potassium hydroxide	Not available.	2 (Ceiling)	Not available.	Not available.

**Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)**

Components	TWA		STEL	
	ppm	mg/m3	ppm	mg/m3
Potassium carbonate	Not available.	Not available.	Not available.	Not available.
Potassium hydroxide	Not available.	2 (Ceiling)	Not available.	Not available.

**Canada. Ontario OELs. (Ministry of Labor - Control of Exposure to Biological or Chemical Agents) Components**

Components	TWA		STEL	
	ppm	mg/m3	ppm	mg/m3
Potassium carbonate	Not available.	Not available.	Not available.	Not available.
Potassium hydroxide	Not available.	2 (Ceiling)	Not available.	Not available.

**Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) Components**

Components	TWA		STEL	
	ppm	mg/m3	ppm	mg/m3
Potassium carbonate	Not available.	Not available.	Not available.	Not available.
Potassium hydroxide	Not available.	2 (Ceiling)	Not available.	Not available.

**Mexico. Occupational Exposure Limit Values**

Components	TWA		STEL	
	ppm	mg/m3	ppm	mg/m3
Potassium carbonate	Not available.	Not available.	Not available.	Not available.
Potassium hydroxide	Not available.	Not available.	Not available.	Not available.

<b>Engineering controls</b>	Ensure adequate ventilation, especially in confined areas.
<b>Personal protective equipment</b>	
<b>Eye / face protection</b>	Wear safety glasses with side shields (or goggles) and a face shield. Wear a full-face respirator, needed.
<b>Skin protection</b>	Wear chemical-resistant gloves, footwear and protective clothing appropriate for risk of exposure. Contact glove manufacturer for specific information.
<b>Respiratory protection</b>	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA 29 CFR 1910.134. Respirator type: Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister.
<b>General hygiene consideration</b>	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical and Chemical Properties

<b>Appearance:</b>	Colorless liquid.
<b>Color</b>	Colorless
<b>Odor</b>	Odorless
<b>Odor threshold</b>	Not available.
<b>Physical State</b>	Liquid.
<b>Form</b>	Clear/cloudy liquid.
<b>pH</b>	12.08 1%v/v
<b>Melting point</b>	Not available.
<b>Freezing point</b>	< -5 °F (< -20.6 °C)
<b>Boiling point</b>	221 °F (105 °C)
<b>Flash point</b>	Not available.
<b>Evaporation rate</b>	Not available.
<b>Flammability limits in air, upper, % by volume</b>	Not available.
<b>Flammability limits in air, lower, % by volume</b>	Not available.
<b>Vapor pressure</b>	Not available.
<b>Vapor density</b>	Not available.
<b>Specific Gravity</b>	1.454 (25 °C)
<b>Solubility (water)</b>	Complete
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Bulk Density</b>	12.13 lb/gal
<b>VOC</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Percent volatile</b>	Not available.

## 10. Chemical Stability Reactivity Information

<b>Chemical Stability</b>	Material is stable under normal conditions.
<b>Conditions to avoid</b>	None known.
<b>Incompatible material</b>	Strong oxidizing agents. Acids.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.
<b>Possibility of hazardous reaction</b>	Hazardous polymerization does not occur.

## 11. Toxicology Information

### Toxicological Data

<b>Components</b>	<b>Test Results</b>
Potassium carbonate	Not available.
Potassium hydroxide	Not available.

**Sensitization** No sensitizing effects known.

### Carcinogenicity

Potassium carbonate	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
Potassium hydroxide	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

**Epidemiology** Not available.

**Mutagenicity** Not available.

**Reproductive effects** Not available.

**Teratogenicity** Not available.

**Further Information** Causes skin and eye burns. Causes digestive tract burns. Mist or vapor irritating to eyes and respiratory tract.

## 12. Ecological Information

### Ecotoxicological data

<b>Components</b>	<b>Test Results</b>
Potassium carbonate	No data available.
Potassium hydroxide	No data available.

**Ecotoxicity** The product may affect the acidity (pH-factor) in water with risk of harmful effects to aquatic organisms.

**Persistence and degradability** No data available.

<b>Bioaccumulation / Accumulation</b>	No data available.
<b>Mobility in environmental media</b>	Not available.
<b>Partition coefficient (n-octanol/water)</b>	Not available.

### 13. Disposal Considerations

<b>Waste codes</b>	Not available.
<b>Disposal instructions</b>	Dispose of contents/container in accordance with local/regional/national/international regulations. When this product as supplied is to be discarded as waste, it does not meet the definition of a RCRA waste under 40 CFR 261.
<b>Contaminated packaging</b>	Since emptied containers may retain product residue, follow label warnings even after container is emptied.

### 14. Transport Information

#### DOT

<b>UN number</b>	UN1814
<b>Proper shipping name</b>	Potassium hydroxide, solution
<b>Hazard class</b>	8
<b>Packing Group</b>	III
<b>Labels required</b>	8
<b>DOT Reportable Quantity:</b>	1000
<b>Additional information</b>	
<b>Special provisions</b>	IB3, T4, TP1
<b>Packaging exceptions</b>	154
<b>Packaging non bulk</b>	203
<b>Packaging bulk</b>	241
<b>ERG number</b>	154

#### IATA

<b>UN number</b>	UN1814
<b>Proper shipping name</b>	Potassium hydroxide, solution
<b>Hazard class</b>	8
<b>Packing group</b>	III
<b>Additional information</b>	
<b>ERG code</b>	8L

#### IMDG

<b>UN number</b>	UN1814
<b>Proper shipping name</b>	Potassium hydroxide, solution
<b>Hazard class</b>	8
<b>Packing group</b>	III
<b>EmS No</b>	F-A, S-B
<b>IMDG Additional information:</b>	

### 15. Regulatory Information

<b>US federal regulation</b>	This product is hazardous according to OSHA 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List.
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**CERCLA (Superfund) Reportable Quantity:** Potassium hydroxide: 1000

**Superfund amendments and Reauthorization Act of 1986 (SARA)**

<b>Hazard Categories</b>	Immediate Hazard:	Yes
	Delayed Hazard:	No
	Fire Hazard:	No
	Pressure Hazard:	No
	Reactivity Hazard:	No

TSCA Section 12(b) Export Notification(40 CFR 707, Subpt. D): Not regulated.

Section 302 extremely hazardous substance (40 CRF 355, Appendix A): No

Section 311/312 (40 CFR 370): No

**Inventory Status**

<b>Country</b>	<b>Inventory Name</b>	<b>On Inventory *</b>
Australia	AICS	Yes
Canada	DSL	Yes
Canada	NDSL	Yes
China	IECSC	Yes
Europe	EINECS	Yes
Europe	ELINCS	No
Japan	ENCS	Yes
Korea	ECL	Yes
New Zealand	NZI	Yes
United States / Puerto Rico	TSCA	Yes
Phillipines	PICCS	Yes

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

**WHMIS Information**

WHMIS status Controlled  
WHMIS classification E - Corrosive

**State Regulation**

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

US - California Hazardous Substances (Director's): Listed substance  
Potassium hydroxide (CAS 1310-58-3) Listed.

US - Massachusetts RTK - Substance: Listed substance  
Potassium hydroxide (CAS 1310-58-3) Listed.

US - New Jersey RTK - Substances: Listed substance  
Potassium hydroxide (CAS 1310-58-3) Listed.

US - Pennsylvania RTK - Hazardous Substances: Listed substance  
Potassium hydroxide (CAS 1310-58-3) Listed.

**16. Other Information**

**Further Information**

HMIS® is a registered trade and service mark of the NPCA.

**HMIS® ratings**

Health: 3  
Flammability: 1  
Physical Hazard: 0

A HMIS® rating including an \* indicates a chronic hazard.

**NFPA ratings**

Health: 3  
Flammability: 1  
Instability: 0

**Disclaimer**

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