

# SHORECHEM, LLC

## MATERIAL SAFETY DATA SHEET

### Potassium Tetraborate

#### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** Potassium Tetraborate

**OTHER/GENERIC NAMES:** Potassium tetraborate tetrahydrate  
Potassium borate

**PRODUCT CODES:** 197-2077, 197-2057

**PRODUCT USE:** Industrial manufacturing

**DISTRIBUTOR:** ShoreChem, LLC  
12 Route 17 North, Suite 309  
Paramus, NJ 07652

**TELEPHONE:** (201) 845-4666  
(Monday-Friday, 8:30 AM – 5:00 PM)

**CHEMTREC PHONE:** 1800-424-9300  
(24 Hours/Day, 7 Days/Week)

#### SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

<u>INGREDIENT NAME:</u>	<u>CAS NO.</u>	<u>% WT</u>
Potassium tetraborate (anhydrous)	1332-77-0 (anh)	~76 (anh)
	12045-78-2 (hydrate)	

Trace impurities and additional material names not listed above may also appear in Section 15 towards the end of the MSDS. These materials may be listed for local "Right-To-Know" compliance and for other reasons.

**OSHA Hazard Communication Standard:** *This product is considered hazardous under the OSHA Hazard Communication Standard.*

#### SECTION 3: HAZARDS IDENTIFICATION

**EMERGENCY OVERVIEW:** A white, odorless, crystalline powder. May cause skin, eye and respiratory tract irritation. Harmful if swallowed. Not flammable.

#### POTENTIAL HEALTH HAZARDS

**SKIN:** May cause irritation, especially if contact is prolonged or repeated. Prolonged exposure to broken or abraded skin may result in symptoms similar to those of ingestion.

**EYES:** Dusty or misty conditions can cause eye irritation.

**INHALATION:** Product dusts may irritate the throat and respiratory tract.

**INGESTION:** Harmful if ingested. Symptoms include nausea, headache, chills and general weakness. Large doses may cause liver and kidney damage, convulsions, cardiac arrhythmias, and potentially fatal respiratory collapse. Overall toxicity estimated to be moderate.

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**DELAYED EFFECTS:** None known.

Ingredients found on one of the three OSHA designated carcinogen lists are listed below.

<u>INGREDIENT NAME</u>	<u>NTP STATUS</u>	<u>IARC STATUS</u>	<u>OSHA LIST</u>
No ingredients listed in this section			

#### SECTION 4: FIRST AID MEASURES

**SKIN:** Wash with plenty of soap and water, then flush with water until all chemical is removed. Remove any contaminated clothing and wash before reuse. Get medical attention if irritation persists.

**EYES:** Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention should discomfort or irritation persist.

**INHALATION:** Remove to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen if a qualified operator is available. Get medical attention.

**INGESTION:** If conscious, give several glasses of water or milk and induce vomiting by touching finger to back of throat. Get medical attention.

**ADVICE TO PHYSICIAN:** Treat symptomatically.

#### SECTION 5: FIRE-FIGHTING MEASURES

##### FLAMMABLE PROPERTIES

<b>FLASH POINT:</b>	Not flammable
<b>FLASH POINT METHOD:</b>	Not applicable
<b>AUTOIGNITION TEMPERATURE:</b>	Not applicable
<b>UPPER FLAME LIMIT (volume % in air)</b>	Not applicable
<b>LOWER FLAME LIMIT (volume % in air)</b>	Not applicable
<b>FLAME PROPAGATION RATE (solids)</b>	Not applicable

##### **EXTINGUISHING MEDIA:**

Water or any standard extinguishing agent.

##### **UNUSUAL FIRE AND EXPLOSION HAZARDS:**

Material will not burn but melts @ 815C to form a glassy, flowable material that might ignite combustibles on contact.

##### **SPECIAL FIRE FIGHTING PRECAUTIONS/INSTRUCTIONS:**

Use water spray to cool fire-exposed containers. Firefighters should wear full protective clothing and NIOSH-approved, self-contained breathing apparatus if fire produces irritating fumes. Product itself is non-flammable.

#### SECTION 6: ACCIDENTAL RELEASE MEASURES

**IN CASE OF SPILL OR OTHER RELEASE:** (See section 8 for recommended personal protective equipment.)

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Sweep or shovel spilled material into containers with a minimum of dusting. Close, label and store container for later disposal. Flush area with water to complete clean-up.

Spills and releases may have to be reported to Federal and/or local authorities. See section 15 regarding reporting requirements.

#### SECTION 7: HANDLING AND STORAGE

**NORMAL HANDLING:** (See section 8 for recommended personal protective equipment.)

Avoid contact with skin and eyes. Do not breathe product dusts. Exercise good personal hygiene and good housekeeping practices. Wash thoroughly after handling.

**STORAGE RECOMMENDATIONS:**

Store in a cool, dry area. Keep containers tightly closed and upright.

#### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**ENGINEERING CONTROLS:**

Provide local exhaust at product handling and transfer points. General mechanical exhaust is adequate for the workplace.

#### PERSONAL PROTECTIVE EQUIPMENT

**SKIN PROTECTION:** Wear full protective clothing (long-sleeve shirt and trousers) and cotton (or similar) gloves when handling dry product. Use impervious gloves for handling product solutions.

**EYE PROTECTION:** Under normal conditions, wear safety glasses. Under dusty conditions, wear chemical safety goggles.

**RESPIRATORY PROTECTION** A high-efficiency NIOSH-approved dust respirator should be used for dusty conditions or when transferring product from containers.

**ADDITIONAL RECOMMENDATIONS** Provide eyewash stations.

#### EXPOSURE GUIDELINES:

<u>INGREDIENT NAME</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>	<u>OTHER LIMIT</u>
No ingredients listed in this section.			

<sup>1</sup>= Limit established by Industry Standard.

<sup>2</sup>= Workplace Environmental Exposure Level (AIHA).

<sup>3</sup>= Biological Exposure Index (ACGIH).

**OTHER EXPOSURE LIMITS FOR POTENTIAL DECOMPOSITION PRODUCTS:**

None

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**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

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<b>APPEARANCE:</b>	White crystalline powder
<b>PHYSICAL STATE:</b>	Solid
<b>MOLECULAR WEIGHT:</b>	305.51
<b>CHEMICAL FORMULA:</b>	$K_2B_4O_7 \cdot 4H_2O$
<b>ODOR:</b>	Odorless
<b>SPECIFIC GRAVITY (H<sub>2</sub>O = 1):</b>	1.95
<b>SOLUBILITY IN WATER (weight %):</b>	15.8% @ 20C; 63.6% @ 100C
<b>pH:</b>	9.15 (1% Solution)
<b>BOILING POINT:</b>	Not applicable – decomposes
<b>MELTING POINT:</b>	815C (anhydrous)
<b>VAPOR PRESSURE:</b>	Negligible
<b>VAPOR DENSITY (air= 1.0):</b>	Not applicable
<b>EVAPORATION RATE:</b>	Not applicable
<b>% VOLATILES:</b>	Not applicable
<b>FLASH POINT:</b>	Not flammable

(Flash point method and additional flammability data are found in Section 5.)

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**SECTION 10: STABILITY AND REACTIVITY**

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**NORMALLY STABLE/(CONDITIONS TO AVOID):**  
Stable under normal conditions.

**INCOMPATIBILITIES:**  
Can react explosively if heated in the presence of zirconium.

**HAZARDOUS DECOMPOSITION PRODUCTS:**  
None known.

**HAZARDOUS POLYMERIZATION:**  
Will not occur.

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**SECTION 11: TOXICOLOGICAL INFORMATION**

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**IMMEDIATE (ACUTE) EFFECTS:**  
Data not available.

**DELAYED (SUBCHRONIC AND CHRONIC EFFECTS)**  
Data not available.

**OTHER DATA:**  
None.

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#### SECTION 12: ECOLOGICAL INFORMATION

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Date not available. Product might be mildly toxic to aquatic life.

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#### SECTION 13: DISPOSAL CONSIDERATIONS

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##### RCRA

Is the unused product a RCRA hazardous waste if discarded? No      If yes, the RCRA ID number is: Not applicable.

##### **OTHER DISPOSAL CONSIDERATIONS:**

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product such as Mixing with other materials may significantly change the characteristics of the material and alter the RCRA classification and the proper disposal method.

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#### SECTION 14: TRANSPORT INFORMATION

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**US DOT HAZARD CLASS:** Not regulated

**US DOT ID NUMBER:**

**PROPER SHIPPING NAME:**

For additional information on shipping regulations affecting this material, contact the information number found in Section 1.

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#### SECTION 15: REGULATORY INFORMATION

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##### TOXIC SUBSTANCES CONTROL ACT (TSCA)

**TSCA INVENTORY STATUS:** All ingredients listed on the TSCA Inventory (anhydrous form, CAS# 1332-77-0)

**OTHER TSCA ISSUES:** None

##### SARA TITLE III/ CERCLA

"Reportable/ Quantities" (RQs) and/or "Threshold Planning Quantities" (TPQs) exist for the following ingredients.

<u>INGREDIENT NAME</u>	<u>SARA/CERCLA RQ (LB)</u>	<u>SARA EHS TPQ(LB)</u>
Phosphoric acid	5000	-----

Spills or releases resulting in the loss of any ingredient at or above its RQ requires immediate notification to the National Response Center (800) 424-8803 and to your Local Emergency Planning Committee.

**SECTION 311 HAZARD CLASS:** Immediate

##### **SARA 313 TOXIC CHEMICALS:**

The following ingredients are SARA 313 "Toxic Chemicals" and may be subject to annual reporting requirements. CAS numbers and weight percents are found in Section 2.

##### INGREDIENT NAME

##### COMMENT

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#### STATE RIGHT-TO-KNOW

In addition to the ingredients found in Section 2, the following are listed for state right-to-know purposes.

<u>INGREDIENT NAME</u>	<u>WEIGHT%</u>	<u>COMMENT</u>
No ingredients listed in this section.		

#### ADDITIONAL REGULATORY INFORMATION:

None listed.

#### WHMIS CLASSIFICATION (CANADA):

Not determined

#### FOREIGN CHEMICAL CONTROL INVENTORY STATUS

Anhydrous form is listed on Canadian DSL and EU EINECS.

#### SECTION 16: OTHER INFORMATION

**CURRENT ISSUE DATE:** November, 2005

**PREVIOUS ISSUE DATE:** January, 2005

#### CHANGES TO MSDS FROM PREVIOUS ISSUE DATE ARE DUE TO THE FOLLOWING:

New Format

**OTHER INFORMATION:** None

All information, statements, data, advice and/or recommendations, including, without limitation, those relating to storage, loading/unloading, piping and transportation (collectively referred to herein as "information") are believed to be accurate and reliable. However, no representation or warranty, express or implied, is made as to its completeness, accuracy, fitness or a particular purpose or any other matter, including, including, without limitation, that the practice of application of any such information is free of patent infringement or other intellectual property misappropriation. ShoreChem, LLC is not engaged in the business of providing technical, operational, engineering or safety information for a fee, and therefore, any such information provided herein has been furnished as an accommodation and without charge. All information provided herein is intended for use by persons having requisite knowledge, skill and experience in the chemical industry. ShoreChem, LLC shall not be responsible or liable for the use, application or implementation of the information, provided herein, and all such information is to be used at the risk, and in the sole judgment and discretion, of such persons, their employees, advisors, and agents.

Date Created	Created By	Replaces	Area	Product/ Process	Special
11/04/05	JD	7/27/05	MSDS	Pot. Tetraborate	CCS