

10/25/89

**MATERIAL SAFETY DATA SHEET  
FOR  
THORN SMITH LABORATORIES  
ANALYZED QUANTITATIVE UNKNOWNNS**

Potassium Biphthalate for acidity  
Catalog Number 80-1475

Manufacturer: Thorn Smith Laboratories  
Address: 7755 Narrow Gauge Rd.  
Beulah, MI 49617  
Phone Number: 616-882-7251  
MSDS Number: TSL-002  
Date Prepared: September 7, 1989

**SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION**

COMPONENTS - Chemical Name & Common Names  
(Hazardous Components 1% or greater; Carcinogens 0.1% or greater)

Potassium Biphthalate

Formula:  $\text{KHC}_8\text{H}_4\text{O}_4$

CAS No.: 877-24-7

OSHA PEL: According to our sources, exposure threshold levels have not been established.

ACGIH TLV: According to our sources, exposure threshold levels have not been established.

OTHER LIMITS: N/A

Sodium Chloride

Formula:  $\text{NaCl}$

CAS No.: 7647-14-5

OSHA PEL: According to our sources, exposure threshold levels have not been established.

ACGIH TLV: According to our sources, exposure threshold levels have not been established.

OTHER LIMITS: N/A

**SECTION 2 - PHYSICAL / CHEMICAL CHARACTERISTICS**

Boiling Point: 1413 °C (2575 °F) ( $\text{NaCl}$ )

Specific Gravity ( $\text{H}_2\text{O} = 1$ ): 1.64 ( $\text{KHC}_8\text{H}_4\text{O}_4$ ); 2.16 ( $\text{NaCl}$ )

Vapor Pressure (mm Hg and Temperature): <1 ( $\text{NaCl}$ )

Melting Point: 801 °C (1474 °F) ( $\text{NaCl}$ )

Vapor Density (Air = 1): No information found.

Evaporation Rate (\_\_\_\_\_ = 1): No information found.

Solubility in Water: 25g/100ml cold water ( $\text{KHC}_8\text{H}_4\text{O}_4$ ); appreciable (more than 10%) ( $\text{NaCl}$ ).

Water Reactive: No.

Appearance and Odor: Colorless or white crystals ( $\text{KHC}_8\text{H}_4\text{O}_4$ ); white crystalline solid ( $\text{NaCl}$ ). Odorless.

### SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

Flash Point and Method Used: No information found.

Auto-Ignition Temperature: No information found.

Flammability Limits in Air (% by Volume): No information found.

LEL: No information found. UEL: No information found.

Extinguisher Media: Water spray, dry chemical, alcohol foam, or carbon dioxide.

Special Fire Fighting Procedures: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

Unusual Fire and Explosion Hazards: As with most organic solids, fire is possible at elevated temperatures or by contact with an ignition source. Not considered to be an explosion hazard.

### SECTION 4 - REACTIVITY HAZARD DATA

STABILITY:

Stable       Unstable

Conditions to Avoid: Stable under ordinary conditions of use and storage.

Incompatibility (Materials to Avoid): Nitric acid, strong oxidizing agents, lithium, inter-halogens, iron, cement.

Hazardous Decomposition Products: Oxides of carbon and potassium may form when heated to decomposition.

HAZARDOUS POLYMERIZATION:

May Occur       Will Not Occur

Conditions to Avoid: No information found.

### SECTION 5 - HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY:

Inhalation       Ingestion       Skin Contact       Eye Contact  
 Not Hazardous

CARCINOGEN LISTED IN:

NTP       OSHA       IARC Monograph  
 Not Listed

TOXICITY: Potassium Biphthalate: No LD50/LC50 information found relating to normal routes of occupational exposure. Sodium Chloride: LD50 (oral-rat) 3000 mg/kg; LD50 (ipr-mouse) 2602 mg/kg; LD50 (scu-mouse) 3150 mg/kg; LD50 (iv-mouse) 645 mg/kg.

HEALTH HAZARDS - Acute:

Inhalation: May cause irritation to mucous membranes because of slight acidity. Symptoms may include coughing and sore throat. May cause irritation to upper respiratory tract.

Ingestion: Large doses may produce nausea, vomiting, and abnormal sensations in hands and feet. Because of the slight acidity, causes irritation to the mucous membranes. May cause gastrointestinal irritation.

Skin contact: Contact may cause irritation, with redness and pain.

Eye contact: Contact may cause irritation and damage.

HEALTH HAZARDS - Chronic: Elevated blood pressure and accelerated respiration rate.

Signs and Symptoms of Exposure: No information found.

Medical Conditions Generally Aggravated by Exposure: High blood pressure.  
**EMERGENCY FIRST AID PROCEDURES** - Seek medical assistance for further treatment, observation and support if necessary.

Inhalation: Remove to fresh air. Get medical attention for any breathing difficulty.

Ingestion: Give water or milk to drink. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Skin Contact: Remove any contaminated clothing. Wipe off excess from skin.

Wash skin with soap and water for at least 15 minutes. Get medical attention if irritation develops or persists.

Eye Contact: Wash eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention immediately.

## SECTION 6 - CONTROL AND PROTECTIVE MEASURES

Respiratory Protection (Specify Type): For conditions of use where exposure to the dust is apparent, a NIOSH approved dust/mist respirator may be worn. For emergencies, a NIOSH approved self-contained breathing apparatus may be necessary.

Protective Gloves: Wear protective gloves.

Eye Protection: Wear chemical safety goggles. Contact lenses should not be worn when working with this material. Maintain eye wash fountain and quick-drench facilities in work area.

**VENTILATION TO BE USED:** A local exhaust system which captures the contaminant at its source is recommended to prevent dispersion of the contaminant in the workroom air.

Local Exhaust       Mechanical (General)       Special  
 Other (Specify):

Other Protective Clothing and Equipment: Wear clean body-covering clothing.

Hygienic Work Practices: Avoid contact with eyes, skin, and clothing. Avoid breathing dust. Keep container closed, when not in use. Use with adequate ventilation.

Wash thoroughly after handling.

## SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE / LEAK PROCEDURES

Steps to be Taken if Material is Spilled or Released: Ventilate area of leak or spill.

Clean-up personnel may require respiratory protection from dust. Sweep up and containerize for reclamation or disposal. Vacuuming or wet sweeping may be used to avoid dust dispersal.

Waste Disposal Methods: Whatever cannot be saved for reclamation may be delivered to an approved waste disposal facility. Small amounts of residue may be flushed to sewer with plenty of water. Dispose in accordance with all applicable local, state, and federal environmental regulations

Precautions to be Taken in Handling and Storage: Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Store in accordance with all applicable local, state, and federal environmental regulations

Other Precautions and/or Special Hazards:

NFPA Rating: No information available.

Health       Flammability       Reactivity       Special

HMIS Rating: No information available.

Health \_\_\_\_ Flammability \_\_\_\_ Reactivity \_\_\_\_ Personal Protection \_\_\_\_

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