

# MATERIAL SAFETY DATA SHEET

## Potassium Hydroxide Flake

### Section 01 - Chemical And Product And Company Information

**Product Identifier** ..... Potassium Hydroxide Flake

**Product Use** ..... Manufacture of soaps, printing inks, paints and varnish removers, dyestuffs, liquid fertilizers and herbicides, electroplating, photoengraving and lithography, electrolyte in alkaline storage batteries and some fuel cells, mordant for wood, absorbent for carbon dioxide and hydrogen sulfide, organic synthesis, food additive.

**Supplier Name** ..... Panther Industries Inc  
108 Internal Rd  
Davidson, SK  
S0G-1A0

**Prepared By** ..... Panther Industries Tech Department

**Preparation Date** ..... 08/10/07

**24-Hour Emergency Phone** ..... 306-664-2522



### Section 02 - Composition / Information on Ingredients

<b>Hazardous Ingredients</b> .....	Potassium Hydroxide	89.5-90.5%
	Water	9.50-10.5%
<b>CAS Number</b> .....	Potassium Hydroxide	1310-58-3
<b>Synonym (s)</b> .....	Caustic potash, KOH, lye, potassium hydrate	

**Section 03 - Hazard Identification**

- Inhalation**..... Airborne concentrations of dust, mist, or spray may cause damage to the upper respiratory tract and even to the lung tissue proper which could produce chemical pneumonia, depending on the severity of the exposure.
- Skin Contact / Absorption**..... Destructive to tissues contacted and produces severe burns. A latent period may exist between exposure and sense of irritation.
- Eye Contact**..... Destructive to eye tissues on contact. Will cause severe burns that result in damage to the eyes and including blindness
- Ingestion**..... Swallowing can cause sever burns and complete tissue perforation of mucous membranes of the mouth, throat, esophagus, and stomach. Other symptoms may include vomiting, diarrhea. Severe scarring of tissue and death may result. Estimated lethal dose: 5 grams.
- Exposure Limits**..... TLV: 2mg/m<sup>3</sup> (ceiling values) (ACGIH 2000).

**Section 04 - First Aid Measures**

- Inhalation**..... Remove victim to fresh air. Give artificial respiration only if breathing has stopped. If breathing is difficult, give oxygen. Seek immediate medical attention.
- Skin Contact / Absorption**..... Remove contaminated clothing. Wash affected area with soap and water. Seek medical attention if irritation occurs or persists.
- Eye Contact**..... Flush immediately with water for at least 20 minutes. Forcibly hold eyelids apart to ensure complete irrigation of eye tissue. Seek immediate medical attention
- Ingestion**..... Do not induce vomiting. If vomiting occurs, lean victim forward to prevent breathing in vomit. Give a cup of water to dilute. Do not give anything by mouth to an unconscious or convulsing person. Seek immediate medical attention.
- Additional Information**..... None

**Section 05 - Fire Fighting**

- Conditions of Flammability**..... Negligible fire hazard
- Means of Extinction**..... Where fire is involved use any fire fighting agent that is appropriate extinguishing media for material that is supplying the fuel to the fire.

**Flash Point**..... Not applicable

**Auto-ignition Temperature**..... Not applicable

**Upper Flammable Limit** ..... Not available

**Lower Flammable Limit**..... Not available

**Hazardous Combustible Products**... None known

**Special Fire Fighting Procedures**..... Wear NIOSH-approved self-contained breathing apparatus and protective clothing. Potassium hydroxide and its solutions will not burn or support combustion. However, reaction of potassium hydroxide with a number of commonly encountered substances can generate sufficient heat to ignite nearby combustible materials. Reaction of potassium hydroxide with certain metals can generate flammable and explosive hydrogen gas. Protective clothing and pressure demand, self-contained breathing apparatus should be worn by fire fighters in areas where product is.

**Explosion Hazards**..... Not applicable

**Section 06 - Accidental Release Measures**

**Leak / Spill**..... Wear appropriate personal protective equipment. Ventilate area. Only enter area with PPE. Stop or reduce leak if safe to do so. Prevent material from entering sewers.

**Deactivating Materials**..... Acetic acid, hydrochloric acid (any dilute inorganic acid)

**Section 07 - Handling and Storage**

**Handling Procedures**..... Use proper equipment for lifting and transporting all containers. Use sensible industrial hygiene and housekeeping practices. Wash thoroughly after handling. Avoid all situations that could lead to harmful exposure.

**Storage Requirements**..... Store in watertight containers in a cool dry place. Materials that react with potassium hydroxide and easily ignitable materials should not be stored in the same area. Keep containers closed when not in use and when empty. Inspect periodically for deficiencies such as damage or leaks.

**Section 08 - Personal Protection and Exposure Controls****Protective Equipment**

- Eyes**..... Chemical goggles, full-face shield, or a full-face respirator is to be worn at all times when product is handled. Contact lenses should not be worn; they may contribute to severe eye injury.
- Respiratory**..... If engineering controls and work practices are not effective in controlling exposure to this material, then wear suitable personal protective equipment including approved respiratory protection.
- Gloves**..... Impervious gloves of chemically resistant material (rubber or PVC) should be worn at all times. Wash contaminated clothing with soap and water, dry thoroughly before reuse.
- Clothing**..... Body suits, aprons, and/or coveralls of chemical resistant material should be worn at all times. Wash contaminated clothing with soap and water, dry thoroughly before reuse.
- Footwear**..... Impervious boots of chemically resistant material should be worn at all times

**Engineering Controls**

- Ventilation Requirements**..... Mechanical ventilation (dilution or local exhaust), process or personnel enclosure, and control of process conditions. Supply sufficient replacement air to make up for air removed by exhaust systems.
- Other**..... Emergency shower and eyewash should be in close proximity.

**Section 09 - Physical and Chemical Properties**

- Physical State**..... White solid
- Odor and Appearance**..... White, odorless flakes
- Odor Threshold**..... Odorless
- Specific Gravity (Water=1)**..... 2.044 @ 20°C
- Vapor Pressure (mm Hg, 20C)**..... 60mm Hg @ 1013°C
- Vapor Density (Air=1)**..... Not applicable
- Evaporation Rate**..... Not applicable

**Boiling Point**..... 1320°C @ 760mm Hg  
**Freeze/Melting Point**..... 400°C  
**pH**..... 0.01 moles/Litre has pH= 12.0  
**Water/Oil Distribution Coefficient**.... Not available  
**Bulk Density**..... Not available  
**% Volatiles by Volume**..... Nil  
**Solubility in Water**..... 1.10kg/L @ 25°C  
**Molecular Formula**..... KOH  
**Molecular Weight**..... 56.10

### Section 10 - Stability and Reactivity

**Stability**..... Stable  
**Incompatibility**..... Avoid direct contact with water. This product may be slowly added to water or acids with dilution and agitation to avoid a violent exothermic reaction. When handling this product, avoid contact with aluminum, tin, zinc, and alloys containing these metals. Do not mix strong acids without dilution and agitation to prevent violent or explosive reactions. Avoid contact with leather, wool, acids, organic halogen compounds, or organic nitro compounds.  
**Hazardous Products of Decomposition**.. None known  
**Polymerization**..... Will not occur

### Section 11 - Toxicological Information

**Irritancy**..... Severe irritant. Skin and eye irritant  
**Sensitization**..... Not available  
**Chronic/Acute Effects**..... There have been no documented effects due to long term exposure to potassium hydroxide. Repeated skin contact may result in drying, cracking and inflammation.  
**Synergistic Materials**..... Not available

**Animal Toxicity Data**..... LD50 (Oral, rat)=365 mg/kg  
LD50 (Oral, male rat)=273 mg/kg

**Carcinogenicity**..... Not considered to be carcinogenic as per IARC and ACGIH.

**Reproductive Toxicity**..... Not available

**Teratogenicity**..... Not available

**Mutagenicity**..... Not available

**Section 12 - Ecological Information**

**Fish Toxicity**..... Not available

**Biodegradability**..... Not available

**Environmental Effects**..... In high concentrations will cause immediate damage to wildlife, fish, and plants.

**Section 13 - Disposal Consideration**

**Waste Disposal**.....Dispose in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act.

**Section 14 - Transportation Information**

**TDG Classification**

**Class**..... 8

**Group**..... II

**PIN Number**..... UN 1813

**Other**..... Secure containers (full and/or empty) with suitable hold down devises during shipment.

**Section 15 - Regulatory Information**

**WHMIS Classification**.....D1B, E

**NOTE: THE PRODUCT LISTED ON THIS MSDS HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CANADIAN CONTROLLED PRODUCTS REGULATIONS. THIS MSDS CONTAINS ALL INFORMATION REQUIRED BY THOSE REGULATIONS**

### **Section 16 - Other Information**

**Note: The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations.**