



# MATERIAL SAFETY DATA SHEET

## SECTION I: IDENTIFICATION OF PRODUCT

**PRODUCT NAME:** Caustic Potash - Potassium Hydroxide 90% KOH (Flake)

**PRODUCT USE:** Oil Well Cement and Fluid Additive **CAS NO.** 1310-58-3

**CHEMICAL FAMILY:** Inorganic alkali

### WORK PLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS)

**WHMIS CLASSIFICATION:** Class E and D-1(B)

**WORK PLACE HAZARD:** Corrosive and Poisonous

### TRANSPORTATION OF DANGEROUS GOODS (TDG)

**SHIPPING NAME:** Potassium Hydroxide, solid

**TDG CLASSIFICATION:** Class 8 (9.2)

**UN NUMBER (PIN):** UN1813

**PACKING GROUP:** II

## SECTION II: HAZARDOUS INGREDIENTS

<u>INGREDIENT</u>	<u>PERCENT</u>	<u>CAS NUMBER</u>	<u>LD<sub>(50)</sub> Oral-Rat</u>	<u>LLC<sub>(50)</sub> Rat-Inhal</u>	<u>ACGIH-TLV</u>
Potassium Hydroxide	90%	1310-58-3	365 mg/kg		

TOXICOLOGY DATA: Regardless of concentration, the severity of damage and extent of its irreversibility increases with length of contact time. Prolonged contact with even dilute potassium hydroxide solutions (=>2.0%) can cause a high degree of tissue destruction. The latent period following skin contact during which no sensation occurs also varies with concentration.

## SECTION III: TOXICOLOGICAL PROPERTIES

**ROUTE OF ENTRY:**  SKIN  EYE CONTACT  INHALATION  INGESTION

**EYE CONTACT:** May cause severe irritation with corneal injury and result impermanent impairment of vision, even blindness.

**SKIN CONTACT:** May cause severe burns.

**INGESTION:** May cause sever burns of mouth, throat and gastrointestinal tissues.

**INHALATION:** It may cause irritation of mucous membranes of the nose and throat.



# MATERIAL SAFETY DATA SHEET

**EFFECTS OF OVEREXPOSURE:** Corrosive to all body tissues with which it comes in contact. The effect of local exposure may consist of multiple areas of superficial destruction of the skin or of primary irritant dermatitis. Similarly, inhalation of dust, spray or mist may result in varying degrees of irritation or damage of the respiratory tract tissues and an increased susceptibility to respiratory illness. These effects occur only when the TLV is exceeded.

---

## SECTION IV: FIRST AID MEASURES

**SKIN CONTACT:** Wash exposed portion of skin with water and soap. Remove contaminated clothing and shoes. Do not reuse until cleaned. Seek medical attention immediately.

**EYE CONTACT:** OBJECT IS TO FLUSH MATERIAL OUT IMMEDIATELY THEN SEEK MEDICAL ATTENTION. Water is the only accepted method of removal. Flush eyes with large amount of water for 15 minutes while holding eyelids open, Seek medical attention. Washing eyes within several seconds is essential to achieve maximum effectiveness.

**INGESTION:** Do not give liquids if person is unconscious or very drowsy. Otherwise give no more than 2 glasses of milk or water and SEEK IMMEDIATE MEDICAL ATTENTION. If vomiting occurs spontaneously, keep airway clear.

**INHALATION:** If affected, remove person to fresh air immediately. If breathing has stopped, apply artificial respiration and administer oxygen if necessary. Seek medical attention.

---

## SECTION V: PHYSICAL DATA

**APPEARANCE AND ODOUR:** :White Flake; odourless or powder, odourless

**SPECIFIC GRAVITY:** 2.044 @ 20°C

**BOILING POINT (°C):** 1320°C

**MELTING POINT (°C):** 400°C

**SOLUBILITY IN WATER:** Complete

**pH:** 0.01 m/l = 12.0

**PERCENT VOLATILE BY VOLUME:** N/A

**EVAPORATION RATE:** N/A

**VAPOUR PRESSURE (mm Hg):** 60 mm/Hg @ 1313°C

**VAPOUR DENSITY (lb/ft<sup>3</sup>):** N/A

---

## SECTION VI: FIRE AND EXPLOSION HAZARD DATA



# MATERIAL SAFETY DATA SHEET

<b>FLASH POINT:</b>	None combustible
<b>FLAMMABLE LIMITS:</b>	None Combustible
<b>EXTINGUISHING MEDIA:</b>	N/A
<b>SPECIAL FIRE FIGHTING PROCEDURES:</b>	Use media proper to primary cause of fire.
<b>UNUSUAL FIRE AND EXPLOSION HAZARDS:</b>	N/A

## SECTION VII: REACTIVITY DATA

<b>STABILITY:</b>	<b>Stable [XX]</b>	<b>Unstable [ ]</b>
<b>INCOMPATIBILITY (CONDITIONS TO AVOID):</b>	Contact with aluminium, strong acids	
<b>HAZARDOUS DECOMPOSITION PRODUCTS:</b>	None	
<b>HAZARDOUS POLYMERIZATION:</b>	Will not occur [XX]	May occur [ ]

## VIII: PREVENTIVE MEASURES

### SPECIAL PROTECTION INFORMATION

<b>RESPIRATORY PROTECTION:</b>	NIOSH/MSHA approved respirator where dust, mist or spray may be generated.
<b>VENTILATION:</b>	Local exhaust for dust, mist control.
<b>PROTECTIVE GLOVES:</b>	Impervious gloves.
<b>EYE PROTECTION:</b>	Goggles plus full-face shield.
<b>OTHER PROTECTIVE EQUIPMENT (Specify):</b>	Impervious work clothing covering arms and legs, rubber boots and apron. Emergency shower / eyewash should be close.

### PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Keep in a closed, labelled container in ventilated area. Wash before eating, drinking, using tobacco products or rest rooms. Do not breathe dust.

**\*\*NOTE\*\*** Minimum contact with this and all chemicals is recommended as a good, general policy to follow.

### STEPS TO BE TAKEN IN CASE THE MATERIAL IS SPILLED OR RELEASED

ALWAYS SAFETY CLOTHING AND EQUIPMENT. Leaks should be stopped. Spills should be contained and cleaned up immediately and removed to chemical waste area. Spills should be shovelled up or removed by using a vacuum truck (if liquid). Neutralize remaining traces of material with any dilute inorganic acid such as hydrochloric, sulphuric, nitric, and phosphoric and acetic acid. The spill - area should then be flushed with water followed by liberal covering of sodium bicarbonate. All clean-up material should be removed and placed in approved containers, labelled and stored in a safe



# MATERIAL SAFETY DATA SHEET

place to await proper treatment or disposal. Spills or releases should be to the appropriate local, provincial and federal agencies.

## WASTE DISPOSAL METHOD

Dissolve slowly in water; carefully neutralize with dilute acid and discharge to chemical waste treatment. Consult federal or local authorities for proper disposal procedure.

---

## SECTION IX: PREPARATION

THE INFORMATION CONTAINED HEREIN IS GIVEN IN GOOD FAITH, BUT NO WARRANTY, EXPRESSED OR IMPLIED, IS MADE.

**DATE PRINTED:** March 28, 2007

**BY:** MILLENNIUM TECHNOLOGIES LTD.

**DATE MODIFIED:** February 2007

**APPROVED BY:**

**SUPERSEDES:** May 2004

**24 HOUR PHONE:** 403-252-5904