

Prairie Mud Service Ltd.

"Serving Western Canada with 24 Hour Drilling Mud Service"

MSDS (Material Safety Data Sheet)

Caustic Potash Flake 90%

Prepared By: **Prairie Mud Service**
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DATE: **October 15, 2009**
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CHEMICAL, PRODUCT AND IDENTIFICATION:

Product Id: LA2277
Product Name: Caustic Potash Flake 90%
Synonyms: Caustic potash ; Potassium hydrate
Chemical Family: None Known
Application: Not Available

COMPOSITION / INFORMATION ON INGREDIENTS:

Ingredients	Percentage (WIW)	LD50s and LC60s Route & Species:
Potassium Hydroxide 1310-58-3	60-100	Oral LD50 (Rat) 214 mg/kg
Water 7732-18-5	7-13	Not available.

Note: No additional remark.

HAZARDS IDENTIFICATION:

Potential Acute Health Effects:

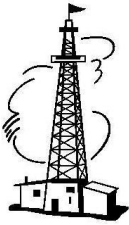
Eye Contact: Corrosive to eye tissue and may cause severe damage and blindness.
Skin Contact: Corrosive. May cause moderate skin irritation. May cause skin burns.
Inhalation: Causes severe respiratory irritation. Inhalation of dust may cause coughing and sneezing. High concentrations can cause lung damage.
Ingestion: May cause burns of the mouth, throat and stomach. May cause pain, nausea, vomiting and diarrhea. Severe scarring of tissue and death may result. Estimated lethal dose : 5 grams.

FIRST AID MEASURES:

Eye Contact: Flush eyes with gently flowing water for at least 15 minutes or until the chemical is removed, while holding the eyelid(s) open. Take care not to rinse the contaminated water into the unaffected eye or face. Seek immediate medical attention.

Skin Contact: In case of contact, immediately flush skin with plenty of water for at least 15 minutes. Get medical attention. Remove contaminated clothing and launder before reuse.

Inhalation: If symptoms are experienced, remove source of contamination or move victim to fresh air. If symptoms persist, get medical attention. If the affected person is not breathing, apply artificial respiration. If breathing is difficult, give oxygen. In situations where administering oxygen is appropriate, first aiders must be trained in the safe use and handling of oxygen. It is preferable to administer oxygen under a doctor's supervision or advice. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation (CPR) immediately. Immediate medical assistance is required. **Ingestion:** Seek immediate medical attention. Do NOT induce vomiting. Never give anything by mouth to an unconscious or convulsing person. If vomiting occurs spontaneously, keep head below hips to prevent



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aspiration of liquid into the lungs. Administer artificial respiration if breathing has stopped, If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation (CPR) immediately.

Notes to Physician: Treatment based on sound judgment of physician and individual reactions of patient.

FIRE FIGHTING MEASURES:

Flash Point:	None.
Flash Point Method:	Not applicable.
Auto-ignition Temperature:	Not Available.
Flammable Limits in Air (%):	Not Available.
Extinguishing Media:	Use extinguishing media appropriate for surrounding fire.
Special Exposure Hazards:	Do not direct a solid stream of water or foam into burning molten material; this may cause spattering and spread the fire. Contact with water or moisture may generate enough heat to ignite combustibles. Reacts with metals to generate flammable hydrogen gas.

Hazardous Decomposition/Combustion Materials (under fire conditions): Oxides of potassium.

Special Protective Equipment: Fire fighters should wear full protective clothing, including self-contained breathing equipment.

NFPA RATINGS FOR THIS PRODUCT ARE: HEALTH 3, FLAMMABILITY 0, INSTABILITY 2

HMIS RATINGS FOR THIS PRODUCT ARE: HEALTH 3, FLAMMABILITY 0, REACTIVITY 2

ACCIDENTAL RELEASE MEASURES:

Personal Precautionary Measures: Wear appropriate protective equipment.

Environmental Precautionary Measures: Prevent entry into sewers or streams, dike if needed.

Procedure for Clean Up: Ventilate area. Restrict access to unprotected personnel. Scoop up or vacuum up and place in an appropriate closed container. Flush area with water to remove trace residue. Absorb with an inert dry material and place in an appropriate waste disposal container.

HANDLING AND STORAGE:

Handling: For industrial use only. Handle and open containers with care. Avoid contact with eyes, skin and clothing. Do not ingest. Avoid inhalation of chemical. Empty containers may contain hazardous product residues. Keep the containers closed when not in use. Protect against physical damage. Use appropriate personnel protective equipment.

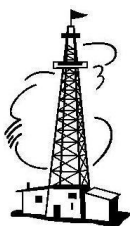
SPECIAL PRECAUTIONS FOR DILUTING CAUSTIC POTASH:

1. ALWAYS add caustic potash to water with constant agitation. NEVER add water to the caustic potash.
2. The water should be lukewarm (80 - 100F). NEVER start with hot or cold water.

The addition of caustic potash to liquid will cause a rise in temperature. If caustic potash becomes concentrated in one area, is added too rapidly, or is added to hot or cold liquid, a rapid temperature increase can result in DANGEROUS mists, boiling or spattering which can cause an immediate VIOLENT ERUPTION.

Avoid contact with organic materials and concentrated acids- may cause violent reactions. Caustic potash reacts with magnesium, aluminum, zinc (galvanized), tin, chromium, brass and bronze, generating hydrogen which is explosive. Caustic potash may react with various sugars to generate carbon monoxide. Hazardous carbon monoxide gas can form upon contact with food and beverage products in enclosed vessels and can cause death.

Storage: Store in a cool, dry, well ventilated area. Store in accordance with good industrial practices. Keep containers tightly closed.



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EXPOSURE CONTROLS / PERSONAL PROTECTION:

Engineering Controls:

Local exhaust ventilation as necessary to maintain exposures to within applicable limits.

Respiratory Protection: If exposure exceeds occupational exposure limits, use an appropriate NIOSH-approved respirator. <10 X PEL, Use a N95 half mask respirator; <50 X PEL, Use a full face respirator equipped with N95 filter; >50 X PEL, use a full face, supplied air respirator (continuous flow mode)

Gloves:

Rubber gloves. Neoprene gloves.

Skin Protection: Impervious boots. Apron, coveralls and/or other resistant protective clothing.

Eyes: Chemical goggles; also wear a face shield if splashing hazard exists.

Other Personal Protection Data: Ensure that eyewash stations and safety showers are proximal to the work-station location.

Ingredients	Exposure Limit - ACGIH	Exposure Limit - OSHA	Immediately Dangerous to Life or Health - IDLH
Potassium Hydroxide	2 mg/m ³ Ceiling	2 mg/m ³ Ceiling	Not Available.
Water	Not available.	Not available.	Not Available.

PHYSICAL AND CHEMICAL PROPERTIES:

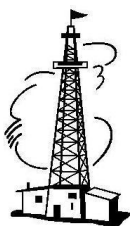
Physical State:	Solid
Colour:	White.
Odour:	Odourless
PH:	13.5 (0.1 M)
Specific Gravity:	2.044 @ 20 °C
Boiling Point:	Not Available.
Freezing/Melting Point:	400 °C / 752 °F
Vapour Pressure:	60 mm Hg @ 1013 °C
Vapour Density:	Not Available.
% Volatile by Volume:	Not Available.
Evaporation Rate:	Not Available.
Solubility:	Soluble in water.
VOCs:	Not Available.
Viscosity:	Not Available.
Molecular Weight:	56.11

STABILITY AND REACTIVITY:

Chemical Stability:	Stable.
Hazardous Polymerization:	Will not occur.
Conditions to Avoid:	Avoid excessive heat, open flames and all ignition sources. Do not allow water to get into container because of violent reaction.
Materials to Avoid:	Contact with water. Acids. Flammable liquids. Organic halides. Contact with reactive metals may produce flammable hydrogen gas. Nitromethane and similar nitro compounds.

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Hazardous Decomposition Products: Potassium oxide
Additional Information: No additional remark.

TOXICOLOGICAL INFORMATION:

Principle Routes of Exposure

Ingestion: May cause burns of the mouth, throat and stomach. May cause pain, nausea, vomiting and diarrhea. Severe scarring of tissue and death may result. Estimated lethal dose: 5 grams.

Skin Contact: Corrosive. May cause moderate skin irritation. May cause skin burns.

Inhalation: Causes severe respiratory irritation. Inhalation of dust may cause coughing and sneezing. High concentrations can cause lung damage.

Eye Contact: Corrosive to eye tissue and may cause severe damage and blindness.

Additional Information: This material may cause dermatitis on the skin, or recurrent corneal ulceration and visual disturbances of vision. In rare cases reports have noted long-term inhalation causes bronchial inflammatory reaction or obtrusive airway dysfunction.

Acute Test of Product:

Acute Oral LD50: Oral LD 50 : 273mg/kg (rat)

Acute Dermal LD50: Not Available.

Acute Inhalation LC50: Not Available.

Carcinogenicity:

Ingredients	IARC - Carcinogens	ACGIH - Carcinogens
Potassium Hydroxide	Not listed.	Not listed.
Water	Not listed.	Not listed.

Carcinogenicity Comment: No additional information available.

Reproductive Toxicity/ Teratogenicity/ Embryotoxicity/ Mutagenicity: Not Available.

ECOLOGICAL INFORMATION:

Ecotoxicological Information:

Ingredients	Ecotoxicity - Fish Species Data	Acute Crustaceans Toxicity:	Ecotoxicity - Freshwater Algae Data
Potassium Hydroxide	LC50 (Gambusia affinis) 80.0 mg/L	Not Available.	Not Available.
Water	Not Available.	Not Available.	Not Available.

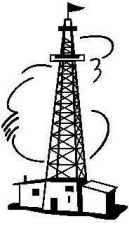
Other Information:

This material is expected to be toxic to aquatic life. This material is inorganic and not subject to biodegradation. This material is believed not to bioaccumulate. This material has exhibited slight toxicity to terrestrial organisms.

DISPOSAL CONSIDERATIONS:

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Disposal of Waste Method: Disposal of all wastes must be done in accordance with municipal, provincial and federal regulations.

Contaminated Packaging: Empty containers should be recycled or disposed of through an approved waste management facility.

TRANSPORT INFORMATION:

DOT (U.S.):

DOT Shipping Name: Potassium Hydroxide, Solid

DOT Hazardous Class 8

DOT UN Number: UN1813

DOT Packing Group: II

DOT Reportable Quantity (lbs): Not Available.

Note: No additional remark.

Marine Pollutant: No

TDG (Canada):

TDG Proper Shipping Name: Potassium Hydroxide, Solid

Hazard Class: 8

UN Number: UN1813

Packing Group:

Note: No additional remark.

Marine Pollutant: No.

REGULATORY INFORMATION:

U.S. TSCA Inventory Status: All components of this product are either on the Toxic Substances Control Act (TSCA) Inventory List or exempt.

Canadian DSL Inventory Status: All components of this product are either on the Domestic Substances List (DSL), the Non-Domestic Substances List (NDSL) or exempt.

Note: Not available.

U.S. Regulatory Rules

Ingredients	CERCLA/SARA - Section 302:	SARA (311, 312) Hazard Class:	CERCLA/SARA - Section 313:
Potassium Hydroxide	Not Listed.	Listed	Not Listed.
Water	Not Listed.	Not Listed.	Not Listed.

California Proposition 65: Not Listed.

MA Right to Know List: Listed.

New Jersey Right-to-Know List: Listed.

Pennsylvania Right to Know List: Listed.

WHMIS Hazardous Class:

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D1B TOXIC MATERIALS E
CORROSIVE MATERIAL



OTHER INFORMATION:

Additional Information:

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

Disclaimer:

NOTICE TO READER:

Prairie Mud expressly disclaims all express or implied warranties of merchantability and fitness for a particular purpose, with respect to the product or information provided herein, and shall under no circumstances be liable for incidental or consequential damages.

Do not use ingredient information and/or ingredient percentages in this MSDS as a product specification.

All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources. The information is believed to be accurate. This information relates only to the product designated herein, and does not relate to its use in combination with any other material or in any other process.

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