OxyChem®

Responsible Care® Good Chemistry at Work

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Occidental Chemical Corporation
5005 LBJ Freeway
P.O. Box 809050
Dallas, Texas 75380-9050

24 HOUR EMERGENCY TELEPHONE:	**1-800-733-3665 or 1-972-404-3228 (U.S.); 32.3.575.55.55 (Europe); 1800-033-111 (Australia)**
TO REQUEST AN MSDS:	**MSDS@oxy.com or 1-972-404-3245**
CUSTOMER SERVICE:	**1-800-752-5151 or 1-972-404-3700**

MSDS NUMBER: M31867

SUBSTANCE: CAUSTIC POTASH ANHYDROUS (ALL GRADES)

TRADE NAMES:
Caustic Potash Standard Crystal; Caustic Potash Standard Flake; Caustic Potash-Crystal; Caustic Potash-Flake; Caustic Potash-Briquettes; Caustic Potash-Flake 90%; Caustic Potash Briquettes 90%

SYNONYMS:
Potassium hydroxide, KOH Dry

PRODUCT USE: glass manufacture, cleaner, process chemical, petroleum industry, food processing

REVISION DATE: Jun 20 2006

2. HAZARDS IDENTIFICATION

NFPA RATINGS (SCALE 0-4): HEALTH=3 FIRE=0 REACTIVITY=1

HMIS RATINGS (SCALE 0-4): HEALTH=3 FLAMMABILITY=0 REACTIVITY=1

EMERGENCY OVERVIEW:
COLOR: white
PHYSICAL FORM: solid
ODOR: odorless
SIGNAL WORD: DANGER
MAJOR HEALTH HAZARDS: CORROSIVE. CAUSES BURNS TO THE RESPIRATORY TRACT, SKIN, EYES AND GASTROINTESTINAL TRACT. CAUSES PERMANENT EYE DAMAGE.
PHYSICAL HAZARDS: Mixing with water, acid or incompatible materials may cause splattering and release of heat.
ECOLOGICAL HAZARDS: This material has exhibited moderate toxicity to aquatic organisms.
PRECAUTIONARY STATEMENTS: Do not get in eyes, on skin, or on clothing. Do not breathe dust. Keep container tightly closed. Wash thoroughly after handling. Use only with adequate ventilation.

POTENTIAL HEALTH EFFECTS:
INHALATION:
SHORT TERM EXPOSURE: irritation (possibly severe), burns, pulmonary edema
LONG TERM EXPOSURE: to our knowledge, no effects are known
SKIN CONTACT:
SHORT TERM EXPOSURE: irritation (possibly severe), burns
LONG TERM EXPOSURE: dermatitis
EYE CONTACT:
SHORT TERM EXPOSURE: irritation (possibly severe), burns, eye damage, blindness
LONG TERM EXPOSURE: visual disturbances
INGESTION:
SHORT TERM EXPOSURE: irritation (possibly severe), burns, nausea, vomiting
LONG TERM EXPOSURE: to our knowledge, no effects are known

CARCINOGEN STATUS:
OSHA: No
NTP: No
IARC: No

3. COMPOSITION, INFORMATION ON INGREDIENTS

COMPONENT: POTASSIUM HYDROXIDE
CAS NUMBER: 1310-58-3
PERCENTAGE: 84.5-90.5

COMPONENT: WATER
CAS NUMBER: 7732-18-5
PERCENTAGE: 9.5-15.5

4. FIRST AID MEASURES

INHALATION: If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. If respiration or pulse has stopped, have a trained person administer Basic Life Support (Cardio-Pulmonary Resuscitation/Automatic External Defibrillator) and CALL FOR EMERGENCY SERVICES IMMEDIATELY.

SKIN CONTACT: Immediately flush contaminated areas with water. Remove contaminated clothing, jewelry, and shoes immediately. Wash contaminated areas with soap and water. Thoroughly clean and dry contaminated clothing and shoes before reuse. Discard contaminated leather goods. GET MEDICAL ATTENTION IMMEDIATELY.

EYE CONTACT: Immediately flush eyes with a directed stream of water for at least 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissues. Washing eyes within several seconds is essential to achieve maximum effectiveness. GET MEDICAL ATTENTION IMMEDIATELY.

INGESTION: Never give anything by mouth to an unconscious or convulsive person. If swallowed, do not induce vomiting. Give large amounts of water. If vomiting occurs spontaneously, keep airway clear. Give more water when vomiting stops. GET MEDICAL ATTENTION IMMEDIATELY.

NOTE TO PHYSICIAN: The absence of visible signs or symptoms of burns does NOT reliably exclude the presence of actual tissue damage. Probable mucosal damage may contraindicate the use of gastric lavage.

5. FIRE FIGHTING MEASURES

FIRE AND EXPLOSION HAZARDS: Negligible fire hazard.

EXTINGUISHING MEDIA: Do not use water. Use extinguishing agents appropriate for surrounding fire.

FIRE FIGHTING: Move container from fire area if it can be done without risk. Wear NIOSH approved positive-pressure self-contained breathing apparatus. Avoid contact with skin.

SENSITIVITY TO MECHANICAL IMPACT: Not sensitive

SENSITIVITY TO STATIC DISCHARGE: Not sensitive

FLASH POINT: Not flammable

6. ACCIDENTAL RELEASE MEASURES

OCCUPATIONAL RELEASE:
Wear appropriate personal protective equipment recommended in Section 8 of the MSDS. Shovel dry material into suitable container. Keep out of water supplies and sewers. This material is alkaline and may raise the pH of surface waters with low buffering capacity. Releases should be reported, if required, to appropriate agencies. Notify Local Emergency Planning Committee and State Emergency Response Commission for release greater than or equal to RQ (U.S. SARA Section 304). If release occurs in the U.S. and is reportable under CERCLA Section 103, notify the National Response Center at (800)424-8802 (USA) or (202)426-2675 (USA).

7. HANDLING AND STORAGE

STORAGE: Store and handle in accordance with all current regulations and standards. Keep container tightly closed and properly labeled. Do not store in aluminum container or use aluminum fittings or transfer lines, as flammable hydrogen gas may be generated. Keep separated from incompatible substances (see Section 10 of the MSDS).

HANDLING: Avoid breathing dust. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. Mixing with water, acid or incompatible materials may cause splattering and release of heat.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

EXPOSURE LIMITS:
CAUSTIC POTASH ANHYDROUS (ALL GRADES):
POTASSIUM HYDROXIDE:
2 mg/m3 ACGIH ceiling

VENTILATION: Provide local exhaust ventilation where dust or mist may be generated. Ensure compliance with applicable exposure limits.

EYE PROTECTION: Wear chemical resistant safety goggles if eye contact is possible. When wet mixing, wear splash resistant safety goggles with a faceshield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

CLOTHING: Wear protective clothing to minimize skin contact. When potential for contact with wet material exists, wear Tychem® or a similar chemical protective suit. When potential for contact with dry material exists, wear disposable coveralls such as Tyvek®. Thoroughly clean and dry contaminated clothing before reuse. Discard contaminated leather goods.

GLOVES: Wear appropriate chemical resistant gloves.

PROTECTIVE MATERIAL TYPES: butyl rubber, natural rubber, nitrile, polyvinyl chloride (PVC), Tychem®, Tyvek®

RESPIRATOR: Where dust or vapor concentration exceeds or is likely to exceed applicable exposure limits, a NIOSH approved respirator is required.
If eye irritation occurs, a full face style mask should be used.
Air-purifying respirators should be equipped with a minimum N-95 dust/mist filter (1/2 facepiece) and N-100 dust/mist filter (full facepiece).
When an air-purifying respirator is not adequate or during spills and/or emergencies of unknown concentrations, a NIOSH approved self-contained breathing apparatus or airline respirator with full-face piece is required.
A respiratory protection program that meets 29 CFR 1910.134 must be followed whenever workplace conditions warrant use of a respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: solid
COLOR: white
ODOR: odorless
MOLECULAR WEIGHT: 56.11
MOLECULAR FORMULA: KOH
BOILING POINT: Not applicable
MELTING POINT: 752 F (400 C)
VAPOR PRESSURE: 60 mmHg @ 1013 C
VAPOR DENSITY: Not applicable

SPECIFIC GRAVITY (water=1): 2.044 @ 20 C
WATER SOLUBILITY: 100%
PH: Not applicable
VOLATILITY: 0%
ODOR THRESHOLD: Not available
EVAPORATION RATE: Not applicable
COEFFICIENT OF WATER/OIL DISTRIBUTION: Not available

10. STABILITY AND REACTIVITY

REACTIVITY: Stable at normal temperatures and pressure.

CONDITIONS TO AVOID: Mixing with water, acid or incompatible materials may cause splattering and release of large amounts of heat. Will react with some metals forming flammable hydrogen gas. Carbon monoxide gas may form upon contact with reducing sugars or food and beverage products in enclosed spaces.

INCOMPATIBILITIES: acids, halogenated compounds, prolonged contact with aluminum, brass, bronze, copper, lead, tin, zinc or other alkali sensitive metals or alloys

HAZARDOUS DECOMPOSITION:
Thermal decomposition products: None known.

POLYMERIZATION: Will not polymerize.

11. TOXICOLOGICAL INFORMATION

CAUSTIC POTASH ANHYDROUS (ALL GRADES):
TOXICITY DATA: As a solid, this material interacts with moist tissue to cause damage. When in solution, this material will affect all tissues with which it comes in contact. The severity of the tissue damage is a function of concentration, the length of tissue contact time, and local tissue conditions. After exposure there may be a time delay before irritation and other effects occur. This material is a strong irritant and is corrosive to the skin, eyes, and mucous membranes. This material may cause severe burns and permanent damage to any tissue with which it comes into contact. Inhalation will cause severe irritation, possible burns with pulmonary edema, which may lead to pneumonitis. Skin contact with this material may cause severe irritation and corrosion of tissue. Eye contact can cause severe irritation, corrosion with possible corneal damage and blindness. In general, chronic effects are due to long-term irritation. This material may cause dermatitis on the skin, or recurrent corneal ulceration and visual disturbances. In rare cases reports have noted long-term inhalation causes bronchial inflammatory reaction or obstructive airway dysfunction.
LOCAL EFFECTS:
Corrosive: inhalation, skin, eye, ingestion
TARGET ORGANS: eyes, skin, respiratory system
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: respiratory system (including asthma and other breathing disorders)

12. ECOLOGICAL INFORMATION

ECOTOXICITY DATA:
FISH TOXICITY: This material has exhibited moderate toxicity to aquatic organisms. For potassium

hydroxide: 80 mg/L 96 hours LC50 Mosquito fish; 165 mg/L 24 hours LC50 Guppy

FATE AND TRANSPORT:
BIODEGRADATION: This material is inorganic and not subject to biodegradation.

PERSISTENCE: This material is alkaline and may raise the pH of surface waters with low buffering capacity. This material is believed to exist in the disassociated state in the environment.

BIOCONCENTRATION: This material is believed not to bioaccumulate.

OTHER ECOLOGICAL INFORMATION: This material has exhibited slight toxicity to terrestrial organisms.

13. DISPOSAL CONSIDERATIONS

Reuse or reprocess if possible. Dispose in accordance with all applicable regulations.

14. TRANSPORT INFORMATION

U.S. DOT 49 CFR 172.101:
PROPER SHIPPING NAME: Potassium hydroxide, solid
ID NUMBER: UN1813
HAZARD CLASS OR DIVISION: 8
PACKING GROUP: II
LABELING REQUIREMENTS: 8
DOT HAZARDOUS SUBSTANCE(S):
Potassium hydroxide 1000 lb(s) (454 kg(s))

CANADIAN TRANSPORTATION OF DANGEROUS GOODS:
SHIPPING NAME: Potassium hydroxide, solid
UN NUMBER: UN1813
CLASS: 8
PACKING GROUP/RISK GROUP: II

15. REGULATORY INFORMATION

U.S. REGULATIONS:
CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES (40 CFR 302.4):
POTASSIUM HYDROXIDE: 1000 LBS RQ

SARA TITLE III SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355.30): Not regulated.

SARA TITLE III SARA SECTIONS 311/312 HAZARDOUS CATEGORIES (40 CFR 370.21):
ACUTE: Yes
CHRONIC: No
FIRE: No
REACTIVE: Yes

SUDDEN RELEASE: No

SARA TITLE III SECTION 313 (40 CFR 372.65): Not regulated.

OSHA PROCESS SAFETY (29CFR1910.119): Not regulated.

FDA: This material has Generally Recognized as Safe (GRAS) status under specific FDA regulations. Additional information is available from the Code of Federal Regulations (CFR) which is accessible on the FDA's website.

STATE REGULATIONS:
California Proposition 65: This product is not listed, but it may contain contaminants known to the State of California to cause cancer or reproductive toxicity as listed under Proposition 65 State Drinking Water and Toxic Enforcement Act. For additional information, contact Customer Service.

NEW JERSEY WORKER AND COMMUNITY RIGHT TO KNOW:
REPORTING REQUIREMENT:
POTASSIUM HYDROXIDE 1310-58-3 84.5-90.5%
WATER 7732-18-5 9.5-15.5%

RIGHT TO KNOW HAZARDOUS SUBSTANCE LIST:
POTASSIUM HYDROXIDE 1310-58-3 84.5-90.5%

SPECIAL HEALTH HAZARD SUBSTANCE LIST:
POTASSIUM HYDROXIDE 1310-58-3 84.5-90.5%

PENNSYLVANIA RIGHT TO KNOW:
REPORTING REQUIREMENT:
POTASSIUM HYDROXIDE 1310-58-3 84.5-90.5%
WATER 7732-18-5 9.5-15.5%

HAZARDOUS SUBSTANCE LIST:
POTASSIUM HYDROXIDE 1310-58-3 84.5-90.5%

ENVIRONMENTAL HAZARDOUS SUBSTANCE LIST:
POTASSIUM HYDROXIDE 1310-58-3 84.5-90.5%

SPECIAL HAZARDOUS SUBSTANCE LIST:
Not regulated.

CANADIAN REGULATIONS:
CONTROLLED PRODUCTS REGULATIONS (CPR): This product has been classified in accordance with the criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

WHMIS CLASSIFICATION: E.

NATIONAL INVENTORY STATUS:
U.S. INVENTORY (TSCA): All the components of this substance are listed on or are exempt from the inventory.

TSCA 12(b) EXPORT NOTIFICATION: Not listed.

CANADA INVENTORY (DSL/NDSL): All components of this product are listed on the DSL.

16. OTHER INFORMATION

MSDS SUMMARY OF CHANGES

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