

MSDS#2234  
MSDS#2236  
MSDS#2237

**VIKING CHEMICAL COMPANY**

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P.O. Box 1595  
Rockford, IL 61110  
(815) 397-0500

MSDS#2234, 2236, 2237 – Date revised: 2/28/2006

**MATERIAL SAFETY DATA SHEET**

**A. IDENTIFICATION AND EMERGENCY INFORMATION**

PRODUCT NAME: Caustic Soda, Anhydrous, All Grades

SYNONYM: Sodium Hydroxide-dry

PRODUCT APPEARANCE/ODOR: White, odorless solid

EMERGENCY TELEPHONE NUMBER:

CHEMTREC - 800/424-9300

VIKING CHEMICAL COMPANY - 815/397-0500

**B. COMPONENTS AND HAZARD INFORMATION**

Hazard Components (Common Name (s))	(Specific Chemical Identity) CAS #	OSHA	ACGIH	Percentage
Sodium Hydroxide	1310-73-2	2mg/m3 TWA	2mg/m3 ceiling	97-98.2%
Sodium Chloride	7647-14-5			0-1.2%
Sodium Carbonate	497-19-8			0.4-1.0%

Hazardous Materials Identification System (HMIS)

Health = 3

Flammability = 0

Reactivity = 2

### C. EMERGENCY AND FIRST AID PROCEDURES

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**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.

**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 footwear which cannot be decontaminated. GET MEDICAL ATTENTION IMMEDIATELY.

**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.

**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.

### D. FIRE AND EXPLOSION HAZARD INFORMATION

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**FLASH POINT (minimum):** Not flammable

**National Fire Protection Association Rating (NFPA):**  
Health = 3      Flammability = 0      Reactivity = 2

**FIRE AND EXPLOSION HAZARDS:** Negligible fire hazard.

**EXTINGUISHING MEDIA AND FIRE FIGHTING PROCEDURES:** Do not use water. Use extinguishing agents appropriate for surrounding fire. Move container from fire area if it can be done without risk.

'EMPTY' CONTAINER WARNING: 'Empty' containers retain residue (liquid and/or vapor) and may be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS OR OTHER SOURCES OF IGNITION: THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Do not attempt to clean since residue is difficult to remove. 'Empty' drums should be completely drained, properly bunged and should be disposed of in an environmentally safe manner and in accordance with local, state and governmental regulations. For work on tanks, please refer to Occupational Safety and Health Administration regulations. ANSI Z49.1, and other governmental and industrial references pertaining to cleaning, repairing, welding, or other governmental and industrial contemplated operations.

#### E. HEALTH AND HAZARD INFORMATION

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EFFECTS OF OVEREXPOSURE: (signs and symptoms of exposure) May cause burns to the respiratory tract, skin, eyes and gastrointestinal tract. May cause permanent eye damage.

EYE CONTACT: Short term-irritation (possibly severe), burns, eye damage, blindness; Long term-visual disturbances

SKIN CONTACT: Short term-irritation (possibly severe), burns; Long term-dermatitis

INHALATION: Short term-irritation (possibly severe), burns, pulmonary edema; Long term-to our knowledge, no effects are known

INGESTION: Short term-irritation (possibly severe), burns, nausea, vomiting; Long term-to our knowledge, no effects are known

#### F. PHYSICAL DATA

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The following data is approximate or typical values and should not be used for precise design purposes.

BOILING POINT:	Not applicable
MELTING POINT:	604F (318C)
SPECIFIC GRAVITY: Water=1	2.13 @ 20C
VAPOR DENSITY: (Air = 1)	Not applicable

EVAPORATION RATE: Not applicable

SOLUBILITY IN WATER: 100%

## G. REACTIVITY

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REACTIVITY: Stable at normal temperatures and pressure.

CONDITIONS TO AVOID: Avoid contact with water. Direct contact with water may cause an exothermic reaction. Carbon monoxide gas may form upon contact with reducing sugars, food and beverage products in enclosed spaces.

IMCOMPATIBILITIES: 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.

## H. SPILL OR LEAK PROCEDURES

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OCCUPATIONAL RELEASE: 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 of r 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).

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

## I. PROTECTION AND PRECAUTIONS

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

**RESPIRATORY PROTECTION:** A NIOSH approved respirator with N95 (dust, fume, mist) filters may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits, or when symptoms have been observed that are indicative of overexposure.

A half facepiece air-purifying respirator may be used in concentrations up to 10X the acceptable exposure level and a full facepiece air-purifying respirator may be used in concentrations up to 50X the acceptable exposure level.

Supplied air should be used when the level is expected to be above the 50X the acceptable level or when there is a potential for uncontrolled release.

A respiratory protection program that meets 29CFR 1910.134 must be followed whenever workplace conditions warrant use of a respirator.

**PROTECTIVE GLOVES:** Wear suitable gloves. Discard contaminated leather goods. When wet mixing, wear chemical resistant gloves such as butyl rubber, natural rubber, neoprene or nitrile.

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

**OTHER PROTECTIVE EQUIPMENT:** Wear protective clothing to minimize skin contact. When potential for contact with wet material exists, wear Ty-chem® SL or similar chemical protective suit. When potential for contact with dry material exists, wear disposable coveralls such as Tyvek®.

## J. TRANSPORTATION INFORMATION

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**TRANSPORTATION INCIDENT INFORMATION:** For further information relative to spills resulting from transportation incidents, refer to latest Department of Transportation Emergency Response Guidebook for Hazardous Materials Incidents, DOT P 5800.3

### DOT IDENTIFICATION:

U.S. DOT 49 CFR 172.101:

PROPER SHIPPING NAME: Sodium hydroxide, solid

ID NUMBER: UN1823

HAZARD CLASS OR DIVISION: 8

PACKING GROUP: II

LABELING REQUIREMENTS: 8

DOT HAZARDOUS SUBSTANCES(S): Sodium hydroxide 1000 lb(s) (454 kg(s))

**K. HANDLING AND STORAGE**

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**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.

**HANDLING:** Avoid breathing dust. Do not get in eyes, on skin or on clothing. Wash thoroughly after handling. When mixing, slowly add to water to minimize heat generation and spattering.

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

N.A. (not applicable)  
N.D. (not determined)  
N.K. (not known)

Date prepared: 12/20/2004



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