

**TEXAS SPECIFICATION NO. 180-58-02B**  
**SODIUM HYDROXIDE (CAUSTIC SODA) - LIQUID, 50%**

Effective Date: May 2011

1. **SCOPE:** This specification establishes the minimum requirements for a commercial grade of sodium hydroxide in 50% aqueous solution, suitable for use in the manufacture of soap and other laundry and janitorial products.

Fifty percent (50%) liquid caustic soda is dangerously corrosive to the skin, eyes, and mucous membranes. Protective clothing, gloves, and goggles should be worn by personnel handling the material. Any part of the body coming into contact with the liquid should be given an immediate and prolonged flushing with running water. Accidental swallowing or contact with the eyes should receive the attention of a physician as quickly as possible.

2. **DEFINITIONS:**

Terminology used in this specification is intended to be generic in nature and consistent with meanings that have been defined through general use and/or accepted trade practices. Where variant meanings may exist, the applicable interpretation shall be determined by the Texas Procurement and Support Services, a division of the Texas Comptroller of Public Accounts (CPA).

3. **SPECIFICATION REQUIREMENTS:** The 50% liquid caustic soda furnished under this specification shall meet or exceed the following requirements:

3.1 **GENERAL REQUIREMENTS:** The product shall be a clear, colorless solution, free from crystallized material or other sediment.

3.2 **CHEMICAL AND PHYSICAL REQUIREMENTS:** The product shall conform to the requirements below, when tested by the procedure of Section 4.

Requirement	Minimum	Maximum	Testing Method
Total alkalinity as Na <sub>2</sub> O, pbw*	37.5	39.5	4.1
Sodium hydroxide as NaOH, pbw*	48.5	51.0	4.2
Carbonate as Na <sub>2</sub> CO <sub>3</sub>		0.40	4.3

\*pbw: percent by weight

4. **TESTING:** Testing shall be performed by **American Society for Testing and Materials (ASTM)** procedures: [www.astm.org](http://www.astm.org)

ASTM D 501 - Sampling and Chemical Analysis of Alkaline Detergents

Testing shall be done by an independent laboratory (preferred ASTM recommended, <http://www.astm.org/LABS/search.html>). Tests shall be performed on products will be provided to ordering agencies.

The product furnished under this specification shall be tested by the following methods:

4.1 **Total alkalinity as Na<sub>2</sub>O:** Determine compliance by the procedure of ASTM D 501.

4.2 **Sodium hydroxide as NaOH:** Determine compliance by the procedure of ASTM D 501.

4.3 **Carbonate as Na<sub>2</sub>CO<sub>3</sub>:** Determine compliance by the procedure of ASTM D 501.

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5. **INSPECTION:** Products furnished under this specification shall be inspected by, or at the direction of the customer at the time of delivery.
6. **PACKAGING:** Unless otherwise specified in the Invitation for Bids, the product shall be delivered in 55 gallon polyethylene drums of approximately 700 lbs. net.

The product shall neither affect nor be affected by the container for a period of one year from date of shipment.

Packing for shipment shall be in accordance with the manufacturer's standard practice and in a manner readily accepted by common carriers engaged in interstate commerce. Within the shipping carton, units shall be packed in a manner designed to minimize damage during the shipment because of rough or improper handling.

6.1. **PACKAGE MARKINGS:** Each shipping container shall be clearly marked with the following:

- 6.1.1. Name of contents, including brand name, if any.
- 6.1.2. Quantity contained in pounds and/or kilograms.
- 6.1.3. Name and address of the manufacturer.
- 6.1.4. Warning statements as required by governmental regulations. A label on a container of a hazardous chemical must meet the requirements of the most current OSHA standards.
- 6.1.5. The following additional information shall either be marked on the container or appear on the shipping documents:
  - Purchase order number or contract number.
  - Name and address of customer.
  - Customer's requisition number.

6.2. **LABELING:** Each container shall bear a durable label containing the name of the product and instructions for use, including required precautionary statements.

7. **COMPLIANCE:** The vendor must comply with the following documents upon delivery:

7.1. **Certificate of Analysis (CA):** A certificate of analysis from the manufacturer shall be submitted with each shipment.

7.2. **Material Safety Data Sheets (MSDS):** All Items must conform to the Texas Hazard Communications Act by being certified as nontoxic or providing an official MSDS sheet conforming to the requirements of the most current OSHA standards. A copy of the official MSDS sheet for each applicable chemical product must be submitted with each sample; each initial shipment; and updated MSDS must be provided with the first shipment after update.

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**8. APPROVED PRODUCTS LIST (APL):**

The CPA maintains an APL of products that meet or exceed the requirements of this specification. The products being approved are listed as follows:

<b>Manufacturer</b>	<b>Brand Name / Product Number</b>
BASF Corporation, Chemicals Division	Caustic Soda 50%
Dow Chemical U.S.A.	Caustic Soda 50%
Occidental Chemical Corporation	Caustic Soda, Diaphragm Grade
Olin Chemicals	Caustic Soda 50%
PPG Industries, Inc.	Caustic Soda 50%
Vulcan Materials Company, Chemical Division	Caustic Soda 50%

**To have a new product listed on the APL, the following procedures are required:**

8.1. Submit a written request to CPA, Texas Procurement and Support Services Division and include the following documentations:

- **Official Certificate of Analysis from an independent laboratory and must list the following:**
  - ✓ Chemical Name (CTFI/INCI name) and CAS No.
  - ✓ Manufacturer Name
  - ✓ Brand Name or Trade Name
  - ✓ Batch or Lot Identification Number
  - ✓ Each analytical result given as outlined in the RFP specifications
  - ✓ Laboratory Name, Address, and Contact Information
- **Detailed technical specifications**
- **Product literature**
- **Material Safety Data Sheet (MSDS)**

8.2. The Certificate of Analysis will be reviewed and if approved, samples will be requested, in writing by CPA, for compatibility testing. The shipping instructions will be provided to the vendor at the time of the request.

8.3. A minimum of sixty (60) days will be required for compatibility testing to be conducted.

8.4. Sample sizes should be no less than 250 grams for powders and 500 ml for liquids. **Each sample must be accompanied with a current MSDS from the manufacturer.** More samples may be requested in writing by CPA. Samples will not be accepted unless accompanied with the current MSDS document for that material.

8.5. **CONTINUED COMPLIANCE:** Listing an approved product shall not relieve the vendor of providing products meeting each requirement of this specification. The vendor shall notify the CPA, in writing, of any changes in the product, address, brand name, etc.

8.6. **REMOVAL FROM APL:** Products on the APL may be removed for non-compliance, as determined by the CPA, or for failure to provide notification of any change to APL product(s).