

**TEXAS SPECIFICATION NO. 180-36-01C**  
**CHLORINE CARRIER, ORGANIC -- SODIUM DICHLOROISOCYANURATE**  
 Effective Date: May 2011

1. **SCOPE:** This specification establishes the minimum requirements for sodium dichloroisocyanurate (sodium dichlorotriazinetrione) for use as a chlorine carrier in janitorial and laundry product formulations.

Sodium dichloroisocyanurate is a strong chlorinating and oxidizing agent, is heat-sensitive, and is capable of vigorous reaction with oxidizable materials. It also reacts with moisture in either liquid or vapor form to produce irritating vapors. The product should therefore be stored in a cool, dry area and protected from possible contact with reactive materials. Atmospheric moisture should be excluded from a partly empty container by tightly securing the polyethylene bag and the drum lid. Compounding into finished products should be carried out in accordance with manufacturer's recommendations, including the use of anhydrous materials and avoidance of overheating during the mixing process.

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:** Sodium dichloroisocyanurate furnished under this specification shall meet or exceed the following:

3.1. **GENERAL REQUIREMENTS:** The product shall be in the form of free-flowing white crystalline granules. It shall be stable when stored at ordinary temperatures out of contact with atmospheric moisture.

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

Requirement	Minimum	Maximum	Testing Method
Available chlorine, pbw*	56%	--	4.1
pH, 1% aqueous solution	6.5	7.0	4.2
Particle Size:			
--through No. 12, pbw*	97	--	4.3
--through No. 100, pbw*	--	2	4.3
Solubility in water, g per 100 ml	25	--	4.4

\*pbw: percent by weight

4. **TESTING:** Testing shall be performed by American Society for Testing and Materials (ASTM) procedures.

**ASTM D 502** - Particle Size of Soaps and Other Detergents

**ASTM D 2022** - Sampling and Chemical Analysis of Chlorine-Containing Bleaches

**ASTM E 70** - Standard Test Method for pH of Aqueous Solutions with the Glass Electrode

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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. **Available Chlorine:** Determine compliance by the procedure of ASTM D 2022.
  - 4.2. **pH, 1% Aqueous Solution:** Prepare a one-percent solution of the chlorine carrier in distilled water at 25°C. Determine compliance by the procedure of ASTM E 70.
  - 4.3. **Particle Size:** Determine compliance by procedure of ASTM D 502.
  - 4.4. **Solubility in Water:** Add a 25-g sample of chlorine carrier to 100 ml distilled water at 25°C in a beaker on a magnetic stirrer. Stir for three (3) minutes, and let stand for one (1) minute. Observe for the presence of solid sediment on the bottom of the beaker. There must be no undissolved particles large enough to settle out in this time period.
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:**  
The chlorine carrier shall be packaged in moisture proof polyethylene lined fiber drums of 220 pounds net capacity.

Product shall be palletized on Grade A, 48" X 40," 4-way slotted, non-returnable pallets. Drums shall be shrink-wrapped and then shrink-wrapped to the pallet.

- 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.

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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.

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>
Occidental Chemical Corporation	ACL-60 Extra Granular
Clearon Corporation	CDB-63
Shikoku International Corporation	NEO-CHLOR 60

**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**

The official Certificate of Analysis 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

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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).