

**TEXAS SPECIFICATION NO. 180-02-04**  
**CALCIUM CARBONATE (MARBLE, LIMESTONE)**

Effective Date: May 2011

1. **SCOPE:** This specification establishes the minimum requirements for a grade of calcium carbonate suitable for use in the manufacture of a powdered scouring and cleansing compound.

Calcium carbonate is a color controlled dry ground, natural material, which contributes its abrasive properties to the end product. It is chemically inert, and requires no unusual precautions in handling other than avoidance of the inhalation of fine particles.

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:** Calcium carbonate furnished under this specification shall meet or exceed the following:

3.1. **GENERAL REQUIREMENTS:** The product shall be a free-flowing, finely divided solid, white in color.

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

Requirements	Minimum	Maximum	Testing Method
CaCO <sub>3</sub> , pbw*	94	96	4.4
Fe <sub>2</sub> O <sub>3</sub> , pbw*	--	0.1	4.1
Al <sub>2</sub> O <sub>3</sub> , pbw*	--	0.2	4.1
MgCO <sub>3</sub> , pbw*	--	3	4.1
Dry Brightness, Hunter D25	92	--	4.1
Apparent density, lb/ft <sup>3</sup>	60	90	4.2
Particle size % Retained, pbw on: No. 325 standard sieve (45 um)	--	15	4.3
Mean Particle Size: Microns	13	20	4.3

\*pbw: percent by weight

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

ASTM D 146 - Standard Test Method for Particle Size of Soaps and Other Detergents

ASTM D 371 - Standard Test Method for Wire-Cloth Sieve Analysis of Nonplastic Ceramic Powders

ASTM D 511 - Standard Test Method for Calcium and Magnesium in Water

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:

**TEXAS SPECIFICATION NO. 180-02-04**  
**CALCIUM CARBONATE (MARBLE, LIMESTONE)**

Effective Date: May 2011

**4.1. Percentage Composition and Weight loss on Ignition:**

Standard methods in ASTM C 146.

**4.2. Apparent Density:** Weigh a sample of at least 50 g into a 100 ml graduated cylinder to the nearest 0.1 g. Tap the cylinder lightly to level the surface, and read the volume of the contents. Calculate apparent density from the expression:

$$lb/ft^3 = (62.4 \times g \text{ sample}) / ml \text{ sample, and determine compliance with Section 3.2.}$$

**4.3. Particle Size:** Dry-sieving procedure of ASTM C 371, using the screen sizes specified in the requirement.

**4.4. Calcium Carbonate Determination:** Standard methods in ASTM D 511.

**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 product shall be delivered in moisture-resistant multi-wall paper bags of 50 pounds (22.7 kg) net contents.

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:

**TEXAS SPECIFICATION NO. 180-02-04**  
**CALCIUM CARBONATE (MARBLE, LIMESTONE)**

Effective Date: May 2011

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>
ECCI	Micro White 100
J. M. Huber Corporation	Hubercarb-G 260

**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 requested in writing by CPA. Samples will not be accepted unless accompanied with the current MSDS document for that material.

**TEXAS SPECIFICATION NO. 180-02-04**  
**CALCIUM CARBONATE (MARBLE, LIMESTONE)**

Effective Date: May 2011

- 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).