

FORM P-7 8 62

TECHNICAL SPECIFICATIONS

CERTAIN-TEED PRODUCTS CORPORATION ASBESTOS CEMENT PIPE	NUMBER 541	PAGE 1
	SUPERSEDES:	DATE OF ISSUE: August 5, 1966
APPLICABLE TO: CPC Asbestos-Cement Pipe		CLASSIFICATION: Purchasing Specification
DESCRIPTION Filler Component of Epoxy Lining For CPC A/C Pipe		
A. <u>General</u> 1.0 <u>Description</u> This specification is intended to describe the properties necessary for the filler content of the Epoxy Lining. The filler is a finely divided silicon dioxide. Other fillers that meet the requirements of this specification and perform satisfactorily in service may also be included with proper authorization. B. <u>Use</u> This material as described in this specification is intended for use in the Epoxy Lining to give the lining opacity, density, and to extend the lining. C. <u>Lot Size</u> For sampling and inspection purposes, a lot shall be defined as the number of bags shipped on one order, received at one time at one location, and identified by a code number. D. <u>Requirements</u> 1.0 <u>Special</u> All suppliers of the finely divided silicon dioxide material shall be approved by the R&D Department of the Pipe Division of Certain-teed Products Corporation (CPC) in writing. After approval, no changes in the source, or in the processing of the material shall be made without authorization, in writing, from the R&D Department of the Pipe Division of CPC. 2.0 <u>Manufacturer's Inspection</u> The manufacturer shall perform such inspection that all defective material is removed from each shipment before shipment is made to CPC. CTD015141		
PREPARED BY: <i>J. J. Law</i>	APPROVED BY: <i>ED Meek</i>	

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3.0 <u>Manufacturer's Control Data</u> Once each month or each shipment, whichever is less frequent, the manufacturer shall supply to the Q.C. Supervisor of the plant receiving the shipment copies of his applicable Control Data on samples taken from finished material. As a minimum, the surface area (Blaine Permeability Method) shall be included on the initial shipment, and every six months thereafter the Particle Size Distribution shall be included. 4.0 <u>Physical Characteristics</u> The physical characteristics shall be in accordance with the requirements as shown in Table A. 5.0 <u>Chemical Characteristics</u> The chemical characteristics shall be in accordance with the requirements as shown in Table B. E. <u>Test Methods</u> 1.0 <u>Physical</u> (a) Color - Visual examination. (b) Surface Area - The surface area is to be determined by means of the Blaine Permeability Apparatus in accordance with CPC Test Method No. 3 or ASTM Test Method C 204-55T. Five determinations shall be made on each sample and the average recorded. (c) <u>Particle Size Distribution</u> - The particle size distribution shall be conducted in accordance with Method of Test ASTM E 20. (d) <u>Density</u> - The density shall be conducted in accordance with Method of Test, ASTM C 128.		
PREPARED BY <i>D. J. Law</i>	APPROVED BY: <i>W. M. M. M.</i> CTD015142	

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2.0 <u>Chemical</u> (a) <u>Free Moisture Content</u> Accurately weigh approximately ten (10) grams of the quartered "as received" silicon dioxide into a clean, tared, and previously dried glass weighing bottle. Dry to constant weight at 220°F plus or minus 10°F. Cool in a dessicator and weigh. $\% \text{ Free Moisture} = \frac{\text{Wt. "as received"} - \text{wt. dry}}{\text{Wt. "as received"}} \times 100$ Two determinations shall be made on each sample and the average recorded. (b) <u>Total Silicon Dioxide (SiO₂)</u> Accurately weigh approximately one gram of a dried sample into a clean, previously fired, 30 ml platinum crucible. Add approximately 15 ml of hydrofluoric acid (reagent grade, approximately 50% H.F.). Slowly and cautiously evaporate to dryness over a Meeker Burner. (approximately one (1) hour). Allow to cool; add a second 15 ml of hydrofluoric acid. Slowly evaporate again to dryness. Place a platinum cover over the crucible and adjust the flame of the Meeker Burner to heat the crucible to a read heat. Maintain this heat for one-half ($\frac{1}{2}$) hour. Cool in a dessicator and weigh. <u>Safety Note:</u> This test must be conducted under a hood with forced draft. Hydrofluoric acid is extremely corrosive. The greatest care should be exercised in handling or using this acid. If any of the acid is spilled or splashed on skin or clothing, immediately wash off with large amounts of running cold water. If the skin is burned, seek medical treatment. $\% \text{ Total SiO}_2 = \frac{\text{Wt. Dried sample} - \text{wt. digested sample}}{\text{Wt. dried sample}} \times 100^*$		
PREPARED BY: <i>J. J. Law</i>	APPROVED BY: <i>Ed Muck</i>	

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*To be completely accurate, the % loss on ignition should be subtracted from the above determination. Because of the end use of this product, it is not deemed to be necessary. Two determinations shall be made on each sample and the average recorded. F. <u>Packaging and Marking</u> The silicon dioxide shall be packaged in multi-walled paper bags. The bags shall contain either 50 or 100 pounds. Each bag shall be marked to show the Vendor's name, the Trade Name of the silicon dioxide, the size of the material i.e. 15 micron, the weight, and CPC order number. G. <u>Acceptance and Rejection</u> Certain-teed Products Corporation reserves the right to reject any lot, or lots, not conforming to the requirements of this specification. Such rejection or acceptance of lot, lots, or portions thereof shall not be limited to the time of shipment, but shall be made within 30 days of receipt of the shipment. In the event of a rejection, the vendor shall be immediately advised and the reason for the rejections explained. The vendor shall be given the opportunity to inspect representative samples of the rejected materials in the Materials Laboratory, Ambler, Pennsylvania prior to final dispositions. The vendor must express his desire to inspect rejected material within seven days after notification of the rejections and the physical inspection of rejected material must be performed within 30 days after the notification of rejections. <u>Addendum</u> As a correlary to the stated requirements of this specification, the manufacturers are entreated to become reasonably knowledgeable as to the conditions of successful usage of the filler so that they may employ their best technology to assist in providing silicon dioxide which will perform satisfactorily the usage intended.		
PREPARED BY: <i>J. J. Saw</i>	APPROVED BY: <i>W. M. Mink</i>	

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PREPARED BY <i>J. Law</i>	APPROVED BY: <i>CDMack</i> CTD015145															

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DESCRIPTION: Filler Component of Epoxy Lining For CPC A/C Pipe		
<u>NOT TO BE DISTRIBUTED TO VENDORS</u>		
1.0 <u>General</u> This addendum is designed to show the special sampling plan employed as a means for conducting surveillance over the quality of the silicon dioxide. This addendum also lists the approved vendor(s) and the trade name of the silicon dioxide. This material is used differently than the pulverized silica used in making CPC A/C Pipe. The important tests on this material are particle size and moisture. The Blaine Test should give an indication of Particle Size. Therefore, every shipment must be sampled, with the sample being obtained from twenty (20) per cent of the bags in the shipment using a "thief". The Surface Area and Per Cent Moisture tests shall be conducted on each sample. Twice a year, or as it is felt necessary, a sample shall be sent to the Materials Laboratory, Ambler, Pennsylvania for the Particle Size Distribution and Total SiO₂ content tests. 2.0 <u>Rejections</u> The following procedure shall be followed on all rejected shipments. A. The Headquarters Purchasing Department shall be notified. They will issue instructions on how and when the shipment is to be returned. B. The Quality Control Headquarters and the Materials Laboratory Supervisor shall be notified and a sample of the defective material shall be sent to the Materials Laboratory Supervisor. This sample will be an aid in discussing the rejection with the Vendor. 3.0 <u>Approved Vendor</u> Pennsylvania Glass Sand Corporation 375 Park Avenue New York, New York Approved Product - MIN-U-SIL 15 Micron CTD015146		
PREPARED BY <i>J. J. Law</i>	APPROVED BY: <i>W. M. McK</i>	