



TO (NAME) ✓ I. P. Norris/J. E. Walsh DATE December 3, 1984
LOCATION Long Beach/Atlanta FROM Linda Jo Grogan
SUBJECT See Attached LOCATION King City, CA

Gentlemen: I received the attached today. Perhaps one of you can get back to this man.

Regards,

Linda Jo Grogan

REPLY IN SPACE BELOW. DETACH AND RETURN TRIPLICATE. RETAIN THIS COPY.

*11/18/84 (Smith)
Do not
reply*

ORIGINAL



RECEIVED
DEC 3 1984
CALIDRIA CORPORATION
KING CITY, CA

SPECIALTY MATERIALS DIVISION
2 INDUSTRIAL AVENUE, LOWELL, MASS. 01851
TEL: (617) 452-8961 TWX: 710-343-1284

November 28, 1984

Union Carbide Corporation
P.O. Box K
King City, PA 93930

Attn: Norma Sheild

Dear Mrs. Sheild:

Enclosed for your review and evaluation is a copy of Avco/SMD's proposed quality and purchase specification #M1003 for Colloidal Asbestos Filler.

This specification and the accompanying test procedure are marked "preliminary", subject to your acceptance. This will form the Avco standards against which all future lots will be purchased.

Please direct any problems or technical questions about the specification or procedure to Mr. Joseph Mazzola, Manager of Quality Assurance.

Thank you in advance for your efforts in evaluating these documents.

Sincerely,

Tom Lynch,
Purchasing Manager

TL/ks

PRELIMINARY

FILLER, COLLOIDAL ASBESTOS

PRELIMINARY

QUALITY
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DVANTAGE

ENGINEERING		
PRODUCT DIRECTOR		
PRODUCT ASSURANCE		
PURCHASING		
DEPARTMENT	NAME	DATE

Filler, Colloidal Asbestos

- 1.0 SCOPE: This specification covers the minimum requirements for a colloidal asbestos filler.
- 2.0 PROPERTIES: The material shall be colloidal asbestos filler with the following characteristics:
- 2.1 Moisture Content - 2% max (by weight)
- 2.2 Particle Size - 1.5% max (by weight) retained on a 200 mesh screen
- 2.3 Viscosity - 30,000 - 50,000 cps (based on a 2% dispersion of filler in a standardized polyester resin).
- 3.0 QUALITY REQUIREMENTS: Unless otherwise specified in the Purchase Order, the supplier is responsible for the performance of all the inspection requirements specified in this specification. The procuring activity reserves the right to perform any or all of the tests set forth in this specification to insure that the material conforms to the prescribed requirements.
- 3.1 Individual Tests - each container shall be examined for the marking requirements of Section 4.0.
- 3.2 From each batch (ref Section 7.0) of asbestos filler a one pint sample of material shall be selected at random and placed in a tightly sealed container for performance of the following tests:

<u>TEST</u>	<u>REQUIREMENT</u>	<u>PROCEDURE</u>
Moisture Content	Paragraph 2.1	Avco Procedure QATP 5012
Particle Size	Paragraph 2.2	Avco Procedure QATP 5012
Viscosity of two percent dispersion	Paragraph 2.3	Avco Procedure QATP 5012

- 3.3 Certificate of Conformance: With each shipment the supplier shall submit two copies of a Certificate of Conformance to the requirements of this specification signed by an authorized representative of the company. This certification shall reference as a minimum the following:

- 1) Avco Purchase Order No.
- 2) Avco Specification No.
- 3) Vendor Batch No.
- 4) Quantity of material shipped
- 5) Manufacturer's product designation
- 6) Applicable test data
- 7) Date of manufacture

PRELIMINARY

Spec. M 1003

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4.0 MARKING: The manufacturer shall permanently and legibly label or mark each container with the following information:

- 4.1 Manufacturer's name
- 4.2 Manufacturer's complete product designation
- 4.3 Batch No.
- 4.4 Avco Specification No.
- 4.5 Date of manufacture
- 4.6 D.O.T. Hazard Classification (ORM-C)

5.0 PACKAGING: The colloidal asbestos filler shall be packed in plain 10 lb. bags with a polyethylene bag overwrap according to the manufacturers best commercial practice, or as specified in the purchase order.

6.0 STORAGE: The colloidal asbestos filler shall be stored in sealed polyethylene lined bags at a temperature of 50 to 100°F and shall be capable of meeting the property requirements of this specification after storage for a period of 1 year from date of its receipt by the procuring activity. During the period between manufacturer and receipt by the procuring activity, the manufacturer shall ensure that the material is protected against harmful effects resulting from exposure to temperature extremes and excess moisture.

7.0 BATCH DEFINITION: A batch shall be defined as 400 lbs maximum of colloidal asbestos filler that is produced or blended during a single continuous operation within one processing container.

8.0 APPROVED SOURCES: At the date of issue of this specification, the following product and manufacturer have been approved:

RG-244 Asbestos Calidria

Union Carbide Corp.
P.O. Box K
King City, CA 93930

Lenape Chemicals
P.O. Box 270
Bound Brook, NJ 08805

PRELIMINARY



QUALITY ASSURANCE TEST PROCEDURE

QATP 5012
REV.

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PRELIMINARY

TESTING OF FILLER, COLLOIDAL ASBESTOS

- 1.0 SCOPE
This procedure specifies the test methods to be used to test Colloidal Asbestos Filler.
- 2.0 APPLICABLE DOCUMENTS
NONE
- 3.0 APPARATUS
- 3.1 Gravity convection oven - capable of temperatures to 110°C.
- 3.2 Analytical balance - accuracy of ± 0.1 mg.
- 3.3 Desiccator.
- 3.4 Sieve - 100 mesh.
- 3.5 Stirrer; propeller-type, 3 bladed, 1750 ± 50 rpm, 5 cm diameter blade.
- 3.6 Brookfield Viscometer, Model LV.
- 3.7 Mixing cups, 100 ml and 400 ml, plastic disposable.
- 3.8 Weighing dishes, aluminum.
- 3.9 Constant temperature bath, $25 \pm 2^\circ\text{C}$.
- 4.0 REAGENTS
- 4.1 Polyester resin mixture - prepared by mixing 450 grams Rohm and Haas P-45 polyester resin and 50 grams of styrene monomer. Check viscosity before use. Viscosity should be 550 ± 25 centipoise at $25 \pm 2^\circ\text{C}$. Add styrene monomer to lower viscosity or add P-45 polyester to raise viscosity.

DISTRIBUTION AREA ☐

REASON FOR CHANGE					
Prepared by	Test Engineer	Date	Approved by	Group Leader Test Engineering	Issue Date

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S/N



5.0 TESTING PROCEDURES

5.1 Moisture Content

5.1.1 Weigh approximately 2 grams of the filler into a previously tared aluminum weighing dish. Record weight to the nearest 0.1 mg.

5.1.2 Place in a gravity convection oven for one hour at 110°C.

5.1.3 Cool in a desiccator and reweigh.

5.1.4 Calculate the moisture content as follows:

$$\text{Moisture content} = \frac{W-D}{W} \times 100$$

Where W is the original sample weight, and
D is the dried sample weight.

5.1.5 The moisture content shall be 2.0% maximum.

5.1.6 Record the moisture content on the data sheet. (Appendix I)

5.2 Particle Size

5.2.1 Dry about six grams of filler in a gravity convection oven for one hour minimum. Cool in a desiccator.

5.2.2 Weigh out about three grams of the dried filler. Record weight to the nearest 1 mg.

5.2.3 Place sample on a tared 200 mesh sieve.

5.2.4 Hand jig the screen in about 75mm of tap water.

5.2.5 Continue washing the sample until the tap water remains clear.

5.2.6 Dry screen and residue in a gravity convection oven for one hour minimum at 71-76°C.

5.2.7 Cool in a desiccator and reweigh.

5.2.8 Calculate the percent retained on a 200 mesh sieve as follows:

$$\text{Percent retained} = \frac{\text{Weight of residue}}{\text{Weight of original sample}} \times 100$$

5.2.9 The percent retained on the 200 mesh sieve shall be a maximum of 1.5 percent.

5.2.10 Record particle size on the data sheet. (Appendix I)

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5.3 Viscosity of 2 Percent Dispersion

- 5.3.1 Add 4.0 grams of filler to 196 grams of polyester resin mixture (para. 4.1) and mix by hand in a 400 ml mixing cup, until homogeneous.
- 5.3.2 Place under a propeller stirrer at 1750 ± 50 rpm (para. 3.5) for 10 minutes.
- 5.3.3 Place stirred mixture in a water bath at $25 \pm 2^{\circ}\text{C}$ and allow to stand for one hour.
- 5.3.4 Pour carefully into a clean 100 ml mixing cup, and allow to stand for 5 minutes more.
- 5.3.5 Measure viscosity with a Brookfield Viscometer, Model LV, using a number 4 spindle operating at 6 rpm. Take reading after spindle has made 6 revolutions (1 minute).
- 5.3.6 Calculate the viscosity as follows:
$$\text{Viscosity} = (\text{Reading}) \times (1000)$$
- 5.3.7 The viscosity of the 2% dispersion shall be 30,000 - 50,000 centipoises.
- 5.3.8 Record viscosity of the 2% dispersion on the data sheet. (Appendix I)

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QATP 5012

REV. Original issue

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APPENDIX I
DATA SHEET
SPECIFICATION NO. _____

VENDOR BATCH NUMBER _____

AVCO SERIAL NUMBER _____

QUANTITY _____

SAMPLE SIZE _____

CERTIFICATION VERIFICATION _____

MARKING VERIFICATION _____

Test	Moisture Content	Particle Size	Viscosity of 2% Dispersion
Para.	5.1	5.2	5.3
Spec. Reqm't.	2.0% max.	1.5% max. retained by 200 mesh screen	30,000-50,000 cps centipoises

FINAL ACCEPTANCE _____

I R NUMBER _____

DATE _____