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Originating Department:

Research & Development

Firm Name (In Full - Do Not Abbreviate)			
North American Asbestos Corporation			
Street	City	Zone	State
141 West Jackson Boulevard	Chicago	4	Illino

Persons Interviewed and Titles

Mr. Algerd F. Jerome, Vice President

Written by	Field	DowSmith Inc.	Phone	Date Called	Date Writ
Mark E. Kelly, Jr.		X		April 7, 1964	April 1

Subject

Asbestos to Reinforce Plastics

REMARKS

The purpose of this Report of Call is to record our discussions with Mr. Jerome regarding the use of Crocidolite and Amosite asbestos products for reinforcement of plastics. North American Asbestos Corporation is wholly owned by Cape Asbestos Company of South Africa (a holding and investment company).

Crocidolite asbestos is recognized to be the strongest of all fibrous materials. Tensile strength of this fiber runs up to 876,000 psi. It is unfortunate that the length is limited to the width of the vein of naturally occurring asbestos crystals. Mr. Jerome delivered data that indicated that Crocidolite and Amosite asbestos materials have much better chemical resistance than Canadian asbestos, E glass and C glass. Amercoat lined their Bondstrand pipe with blue Crocidolite asbestos impregnated with either epoxy resins or polyester resins. DowSmith uses Canadian asbestos paper impregnated with epoxy Novolac formulation.

We discussed the DowSmith results of using NAAC Crocidolite asbestos mat to line 6" and 8" Chemline pipe. The tests indicated that we should proceed with Type C10-G12, one ounce per sq. ft. Enough of this material was ordered to accomplish a limited production run. This product sells for about $1.00 per lb.

Of special interest is NAAC's asbestos fibers in loose form since these sell for between 9¢ and 27¢ per lb. For record, these particular products were discussed. Many will be sampled to DowSmith:

Crocidolite C10-F713, 27¢ per lb.--best grade

Crocidolite C10-F700, 15¢ per lb.--Contains a low percentage spherical minerals of the same chemical composition of the fibrous asbestos

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Crocidolite C10-F729, 17¢ per lb.--same as C10-F700, only mechanically treated to open the bundles.

Amosite A10-F701, 9¢ per lb.--compares with C10-F700

Amosite A10-F801, a new grade that will sell for less than 9¢ per lb.

Amosite A10-F208, 25¢ per lb.--a cleaned up version of A10-F801, has fibers up to 2" long.

Crocidolite C10-F600 Series, 1/2¢ per lb. more than the above Series but with appreciably longer fiber length

The above materials are used to reinforce thermosetting resin molding compounds. Mr. Jerome stated that the most common way to disperse these materials was in a high shear mixer such as a Hobart mixer. One possible drawback is that the hardness of both Crocidolite and Amosite asbestos is appreciably greater than E glass and is, thus, more difficult to machine (harder on the tools).. These fibers have a higher modulus than glass, nearer that of steel, and, hence, impact strength would be correspondingly decreased--tensile strength increased.

DowSmith--Little Rock is very interested in evaluating these as the reinforcement for molded epoxy fittings.

Mark E. Kelly, Jr.

MEK:jb

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