

U-002271

Plastics Department
Commercial Resins Division
Experimental Station

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File: 33A

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HASKELL LABORATORY

November 7, 1966

TO: J. F. MORGAN - Employee Relations Department, Haskell Lab
FROM: R. A. DARBY
RAD

TOXICITY OF ASBESTOS

We certainly appreciated your visit on November 3 to discuss health problems associated with the use of asbestos. In accord with your recommendations, we are proceeding as follows:

1. Work with any type asbestos has been halted until we have obtained approved face masks (recommended by the Bureau of Mines) for filtering asbestos dust. ✓

2. Haskell Laboratory will be invited to observe our semiworks operations whereby asbestos will be extrusion compounded. ✓
At the moment we do not have a firm date for this, partly because the approved masks are not in hand.

3. In view of your comments, we will not purchase or work with the crococolite form of asbestos pending further classification of this material. As I understand it, this form of asbestos contains measurable amounts of benzpyrene, a carcinogen, and the incidence of cancer in South African miners has been related to exposure to crococolite. The major form of asbestos, chrysotile, apparently is much safer than crococolite in this respect. We would appreciate your opinion of the hazards of anthophyllite asbestos, which is supplied by the Blue Rock Mining Corporation. ✓

4. Haskell Laboratory will keep us informed of future developments in their study of the toxicology of asbestos. For example, the investigation of an instrument (impinger) to measure dust concentration may be a significant benefit to us and other groups working with such materials as asbestos or glass. I gathered from your comments that dust levels below 5 MM particles/ft³ 058

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are generally safe for chrysotile asbestos, while concentrations of glass dust less than 20 MM particles/ft³ are not harmful. (A reference value of 0.5 MM particles/ft³ for an office or similar room may be helpful in appreciating the levels mentioned above.)

In recalling our discussion, I believe you mentioned that asbestosis, which is the formation of nodules around asbestos fibers accumulated in the lung, results from continuous exposure to asbestos dust for long periods of time, and is similar to silicosis. Asbestosis can lead to cancer in the lower lobes of the lung. Mesothelioma is the formation of malignant tumors in the layer of tissue called the mesothelium, and usually occurs in the plural cavity, although tumors have been known to develop in the same stratum of tissue elsewhere in the body.

Your guidance in the proper handling of asbestos, glass and related fillers for plastics will be greatly appreciated. This area of research has considerable business potential and while we do not want to inhibit ourselves unnecessarily, we want to make sure that our operations are consistent with the latest medical knowledge.

sdo

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