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CONSOLIDATED MONTHLY REPORT

DECEMBER 1973

This Consolidated Monthly Summary contains the technical information for December 1973. Because of the highly confidential nature of its contents, circulation is limited. Those receiving copies are requested to limit access to only those members within their organization who have a real need-to-know.

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MONTHLY REPORT FOR DECEMBER 1973

CONSOLIDATED EDITION

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This report contains information on the following activities at the Washington Research Center:

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CHRON-X [®]	4640	19
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Research Division Patent Activity		Appendix

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Hard lumps were removed from a CleaR reject material and analyzed by X-ray diffraction. They were found to be alpha alumina monohydrate, not the usual alpha alumina.

(Patterson)

SYLODEX MODIFICATION PROJECT (2159)

Objective

Develop a non-asbestos thickening agent for the European thixotrope market. Specific goals include:

1. Screen samples of commercially available fibers for thickening activity.
2. Update information on fiber toxicity for inorganic and organic fibers.

Status

Twelve candidate materials are on hand or ordered for jet milling with Syloid silica. Initial tests will mill 3 parts Syloid with 1 part fiber. Thickening behavior and storage stabilization tests are the screening criteria. Photomicrographs of the milled materials will also be used for comparison with commercial Syldex. Five fiber samples have already been milled and are being tested for thickening and stability.

Contacts with toxicologists reveal asbestos is bad for public relations and physiological reasons. However commercially available organic fibers are generally so large they will not penetrate to the lung and are presumably safe.

(Ferington, Marans, Blouin, Orgell)

Process Development Support - Jet Milling - Fiber Replacement

Mixtures of Syloid[®] 244 (fine-sized silica) and short fibers are being fluid-energy milled (FEM) for evaluation as epoxy resin thickener to replace the present mixture of silica and asbestos.

The fibers that have been milled with silica and forwarded for evaluation are:

Rayon	1.5 denier
Nylon	3.0 denier
Solkafloc (celluloisic)	through 300 mesh
Solkafloc (cellulosic)	through 200 mesh
Fybex	single crystal, potassium titanate

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We are presently awaiting arrival of more fiber samples for processing and are concurrently trying to prepare samples of bagasse and cotton linters fibers.

(Blouin)

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