

MONTHLY HIGHLIGHT REPORT - JANUARY 1969

SECRET - COMPANY CONFIDENTIAL

RESEARCH & DEVELOPMENT DEPARTMENT

INDUSTRIAL PRODUCTS DIVISION

I. INDUSTRIAL PRODUCTS (South Bound Brook)

A. Felts and Papers

1. Asbestos Flooring Felt

An attempt to improve felt tensile strength was made at Erie by precipitating the SBR latex on a low consistency (2 1/2%) asbestos stock. Laboratory work had indicated that improved tensile would result, however, this did not occur in the plant trial. Also under evaluation to improve tensile is a Uniroyal latex (J-3595) which can be added as a direct replacement for the dispersant (Blanco). The stabilizing effect of this latex is such that the subsequent rate of alum addition is reportedly less critical.

A new type machine felt was tested on the last production run at Erie and the top roll of the first press section was run bare. The result was a flooring sheet with improved smoothness on one side.

Tests on the series of five TCD carboxylated SBR latices have been completed and none is considered worthy of plant evaluation. Those imparting improved tensile strength have too adverse an affect on freeness, even using warm water, to run properly on the machine.

2. Gaskets

Additional experiments on densification of the latest asbestos latex gasketing sheet have continued. Material run through the calender at the Westerly, R.I., felt plant was modified to the desired level and retained high tensile strength. The sheet was also processed at the Farrell Corp. laboratory to a satisfactory density and they are preparing a quotation for a laboratory calender which would be used for development work and preparation of customer evaluation samples as well as to establish the requirements of a production size unit. Undensified sheet, which is employed by some large gasket manufacturers, is in the process of evaluation by a customer.

3. Asbestos Paper

A plant trial replacing Vermont 7D asbestos in the saturating paper formulation with Johns-Manville 7E fiber was quite successful and additional runs are planned. The potential saving is \$27,000 per year and this will make additional Vermont material available to Sales who have customers for the 7D.

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B. Asbestos Millboard - Lehr Discs

A plant trial has been completed of a millboard formulation designed for making disc rolls employed in glass manufacturing furnaces. Sample discs have been die cut and submitted to PPG for evaluation.

C. Insulation

Calsilite made with a lower-cost stress corrosion cracking inhibitor passed the tests in the duPont laboratory. Additional samples for repeat tests will be selected by their personnel directly from plant production runs. Production trials employing "M" grade Amosite fiber in place of standard W3 grade gave superior results at comparable cost and this grade is now approved for use in all batches.

D. Automotive

Samples of SBR foam were obtained from TCD and are under evaluation with automotive sound deadening sheets. This is a continuation of the work with urethane foam laminates to replace amberlite surfaced-membranes. Pontiac has expressed an interest in a stiffer sound deadening product for use in the sail area of the roof section. Samples have been prepared using more rigid carrier sheets, including B-10 flooring felt.

II. GRANULES**A. Raw Materials Evaluations and Granule Formulations**

1. Granule color matches for 3M's LR-46 and LR-65 were formulated in anticipation of manufacture at Annapolis. These will replace LR-46 and LR-65 presently used at GAF Dallas.
2. PPG's titanium dioxide, TR-32, produced a slightly lighter 702 white in the laboratory than Cabot's RD-30. No further work is planned with it until Purchasing advises R&D on the economics involved.
3. Extended Charmian plant runs continue to show synthetic cryolite (American Fluoride Corporation) is comparable to natural cryolite which will no longer be available after present inventories of the coating reactant are depleted.

B. Fungus Retardant Granules

1. Research conducted field evaluations of GAF experimental roofing surfaced with 713 (703F) granules in the Mobile area in January. These have been exposed for periods of 16 to 20 months. Microscopic evidence of slight growth was observed on control and experimental granules at isolated locations in shade areas on four roofs. On one additional roof slight algae and/or fungus growth was noted visually on experimentals and controls under similar conditions. The experimental sections of the eight remaining roofs in this field study were free of microscopic growth. On some roofs, but not all, controls were infested.

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