

MICHIGAN
STATE HIGHWAY DEPARTMENT
Charles M. Ziegler
State Highway Commissioner

BITUMINOUS FIBER BOARD FOR JOINTS

By

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Research Project 47 G-34

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Three samples of bituminized fiber board material were examined under similar conditions to determine their suitability for use as a bottom seal for transverse joints in concrete pavements. Comparative test results are presented below.

	<u>Flexcell</u>	<u>Keystone</u>	<u>Servicized</u>
Total bitumen soluble in ccl_4 per cent	38.9	60.8	76.6
Tensile strength, lbs. per inch width			
Wet	37.6	99.0	47.3
Dry	46.6	128.8	58.0
Water absorption, per cent	2.44	0.77	1.29
* Flexure, room temperature in cm	1.24	0.47	0.87

*For flexural test a cantilever section of the material 7 inches long and 2 inches wide was subjected to a 150 gram load at the end for a period of 5 seconds.

Flexcell is made entirely of cane fibers which have been impregnated with a bituminous material. Due to its low bituminous content this material was evidently made for building construction purposes.

The Keystone board consists of a core with kraft paper liner material. The core is composed of a mixture of asphalt, mineral aggregate and fire-resistant fibers. This board is manufactured primarily for building construction purposes.

The Servicized board is manufactured in accordance with current specifications for bituminous premolded joint filler material and consists of a core with cardboard liner material. The core is composed of asphalt, a slight amount of mineral aggregate and a fibrous material which burns readily.

Of the three materials studied, the Keystone board has the better qualities. The Flexcell board should not be considered under any circumstances. The Servicized board, although inferior to the Keystone material, may prove entirely satisfactory for use as a bottom joint seal.

Samples of extracted materials are submitted herewith.

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