File Name	Brake Decomposition Products
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Research and
Engineering Center
December 30, 1966

H. G. Koch

Brake Decomposition Products
Public Health Service

During a recent meeting on asbestos and health at the Public Health Service, I learned that the Public Health Service had performed brake wear studies utilizing dynamometer equipment at the American Brake Shoe Company in Mahwah, New Jersey. These data were reported on April 8, 1966, to the Assistant to the Chief for Epidemiology and Field Studies, Department of Health by Jeremiah Lynch, Senior Sanitary Engineer, Engineering Section, Research and Technical Services Branch. Briefly, the results showed practically no fiber in the decomposition product at "test temperatures" up to approximately 400-500F. Sample evaluation was by electron micrograph.

When the "test temperature" approximated 700F in so-called panic stops, the overload condition apparently deteriorated the resin bond permitting fiber to be ripped out of the brake instead of being worn off. Approximately 15 per cent of the fiber was visible in this decomposition material. The results are summarized below.

Type of Brake	Test Condition	Per Cent Fiber
Disc brake	normal city driving	less than 5%
Bus brake	normal city driving	0
Auto brake	100-200F	~0 (few fibers)
Auto brake	300-500F	less than 1%
Auto brake	600-700F	15%
Auto clutch	normal city driving	0
Bus brake	450-550F	0
Auto brake	400-600F	~0 (few fibers)
Auto brake	100-300F	0
Bus brake	450-550F	0

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Mr. Lynch believes that the results clearly indicate that wear of brake linings is not a significant factor in contributing fiber to the atmosphere. He intends to publish his data as a brief note very shortly. I have invited him to visit the Research Center to review our results with you and have indicated that we would give him permission to quote our figures.

I believe that publication under the auspices of a government laboratory would be far more beneficial than by Johns-Manville. I shall notify you as soon as a firm date has been established for this visit.

[illegible] Decomposition Products
Public Health Service

[illegible]

S. Speil

SS/mac

cc: F. L. Fundsack
W. C. Streib
Dr. K. Smith, DH
J. P. Leineweber
Attn: G. Reimschussel

[illegible]

[illegible]	Test Condition
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
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