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in
with

Ford Motor Company
Environmental and Safety
Engineering Staff

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Mrs. Joni T. Repasch, Record Clerk
Office of Pesticides and
Toxic Substances (TS-793)
U.S. Environmental Protection Agency
401 M Street, S.W.
Washington, D.C. 20460

February 18, 1980

OSHA files

Subject: Commercial and Industrial Use of Asbestos Fibers
Toxic Substances Control Act (TSCA)

Reference: 44 FR 73127, December 17, 1979
Docket No.: OPTS - 61005A

Dear Mrs. Repasch:

The following comments are submitted in response to the above-referenced Notice published in the December 17, 1979 Federal Register. These comments supplement those submitted by Ford Motor Company on December 14, 1979 in response to the October 17, 1979 Advance Notice of Proposed Rulemaking (ANPRM) on Asbestos. We reserve the right to submit additional documentation as we may become aware of additional asbestos-related information.

As discussed in our earlier comments, we believe that should EPA determine it necessary to phase out non-essential asbestos uses, EPA must provide for a reasonable implementation schedule which allows for an orderly transition to non-asbestos substitute materials. Considering the timing, cost, and manpower implications of any such asbestos ban, five years lead time must be provided from determination of suitable substitute availability for new products to assure that manufacturing operations and replacement parts supplies are not disrupted. In the case of past model replacement parts, a "grandfathering" provision will be needed specifying that any asbestos phaseout is applicable to a specific future model year rather than to parts manufactured after a specific effective date. It is therefore extremely important for EPA to better identify the precise criteria to be used by the agency in making the case-by-case essentiality determinations that will be required.

In gathering information on the friction material applications of asbestos, it is important for EPA to recognize that the functions of asbestos in brake lining materials are many and include dimensional stability, structural integrity, heat resistance, and a renewable friction surface. In addition, asbestos provides a compatible mating surface with both cast iron and aluminum.

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Asbestos used in its fibrous form is "locked" in the final product through a resin matrix. The wear debris generated during lining usage consists primarily of pulverized asbestos, rather than asbestos fibers. Preliminary studies indicate that asbestos fibers may present a health risk: the magnitude of any health risk posed by wear debris has yet to be determined and the area deserves further investigation.

With respect to possible substitute materials, we believe that although semi-metallic linings can reduce dependence on asbestos by 80% in disc brake applications, semi-metallic technology does not exist for manufacturing curved segment drum linings or disc linings without asbestos-containing backing layers. To date, no material substitute for asbestos has been identified that provides comparable performance in all applications (i.e., disc, drum, etc). One of the leading replacement candidates, glass fiber, is currently being evaluated to determine performance characteristics and processability. If acceptable, glass fiber could become an economical material replacement in time. Processing of this material to final product specifications, however, would require unique production equipment. The potential health risk of glass fiber also must be determined as the glass fiber size/aspect ratio may be very similar to that for the asbestos fiber.

On page 60062 of the ANPRM, there is considerable discussion of asbestos-containing automotive brake linings, including the observation that "a considerable amount of asbestos-containing material is released to the environment during use and maintenance." We think that it is important to note again that wear debris generated during brake lining usage consists primarily of pulverized asbestos-containing material. Under heat and pressure, asbestos changes configuration and is ground at the rubbing interface. The majority of this material is dispersed by air; however, some remains within the brake assembly.

To develop and successfully implement effective materials regulations and to evaluate substitute materials for possible health risks, the effect of exposure to fibrous materials needs to be understood more fully. We believe that answers to the following critical issues are needed to assure sound decision making:

- 1) Is fiber aspect ratio and/or fiber chemistry critical in evaluating health risk?
- 2) What are the ambient (background) levels of asbestos in the workplace, the household, and in nature?
- 3) Does a threshold limit of acceptable exposure exist?
- 4) Is the technical ability to detect fiber size and concentration adequate?
- 5) Could very stringent asbestos materials regulations be effectively enforced with current fiber detecting technology?

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Ford Motor Company is attempting to develop alternative materials, where feasible, to facilitate an orderly transition to non-asbestos substitutes, and is so advising its suppliers. Not only is Ford looking at asbestos-free friction material substitutes, but we are also initiating actions to investigate asbestos-free substitutes for sealers and fillers. We intend to limit the use of asbestos in newly designed components only to cases where performance criteria or other engineering constraints preclude the use of alternative materials. In such cases, all asbestos is to be encapsulated or resin-coated.

Yours very truly,



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