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December 14, 1977

R. David Pittle
Consumer Products Safety Commission
1111 - 18th Street, NW
Washington, DC 20207

Dear Commissioner Pittle:

Although we are aware that the Commission has moved to publish a ban on the consumer use of joint taping compounds containing free-form asbestos, we wish to reiterate for the record our contention that the finding of "unreasonable risk" is not supported by the available evidence and we question whether "due process" was properly applied in this case.

During the Commission's consideration of the ban, the Union Carbide Corporation has provided extensive technical data on the exposure to free-form asbestos fiber during the use of these materials. These data have included:

1. A presentation and analysis of all of the commercial use data available including data from a number of OSHA compliance inspections.

2. Detailed studies of a large and a small consumer installation of drywall. It should be noted these were the only exposure data presented during the proceedings that bear directly on the ban in question.

The Union Carbide work was checked by two independent laboratories and there is certainly no reason to doubt the levels found in the OSHA compliance inspections. In spite of this, your staff has continued to quote an analysis of risk based on exposures found in one commercial study of only 30-60 minutes duration that was conducted at vaguely defined operating conditions. This latter study showed exposures that were much higher than all of the other results including the OSHA data.

The staff also based its estimate on an assumption of four extensive consumer exposures over the period of a year. While we have no objection to this as a maximum case, provided the appropriate exposure levels are used, risks are also quoted for five years of exposure at the same time. This number of exposures is far beyond that which can be expected for consumers. In view of the statutory requirement for a showing of "unreasonable risk," we feel it is extremely important to draw these points to your attention.

In the installation of drywall, three successive applications of taping compound are made about a day apart. The compound, when dry, may be sanded after the second and third application. On this basis, two extended exposures can occur during the complete finishing, or extensive remodeling, of a full room. The four exposures over a year used by the staff in their risk analysis thus corre-

sponds to finishing two rooms. Although this extent of exposure is not by any means experienced by the entire population of the country, it appears to be a reasonable upper limit for estimation purposes as long as it is recognized as such. The further extension of this to the five years cited would correspond to consumer contact with active finishing operation for about ten (10) rooms. Exposure of this extent is so rare that is is not relevant and should not be used in the estimation of risk.

Let us assume that the four exposures in a year are taken as correct and that Bayard modification of the Enterline model is also accepted. The excess risk estimate of 10 deaths per million over a 40-year period presented by the staff assumes an 8-hour time-weighted average exposure of 10 fibers/cc >5μ. This is based on a test where an unidentified number of professionals conducted pole- and handsanding for about 15 minutes each, mixed an undefined amount of dry compound, and dry swept under unspecified conditions. The handsanding exposure, which is the procedure used by consumers, averaged 5.3 fibers/cc, but much higher levels were present for short periods during mixing and sweeping so the higher level was assumed. The 15-minute exposure level was also assumed to occur over a full eight hours which is far longer than occurs in consumer use. The value of 10 fibers/cc >5μ for eight hours is clearly much too high and, in fact, is not even supported by the handsanding data of the work upon which it is based.

The OSHA compliance inspection data presented to the Commission showed a range of 0.1 to 4 fibers/cc during sanding and 0.6-2.7 fibers/cc during cleanup. Using the highest values found for two hours of sanding and one-half hour of cleanup, which is a reasonable approximation of consumer operations, and a value of 0.5 fibers/cc in the room during the remainder of the day, the eight-hour time-weighted average becomes 1.5 fibers/cc >5μ. The Bayard model predicts a risk of 0.0016 excess deaths over a 40-year period per million persons exposed. If the consumer data for the installation of drywall in a large room are used, the eight-hour time-weighted average is only 0.2 fibers/cc >5μ. The corresponding risk for the finishing of two rooms over a year is something less than 0.0000001 excess deaths per million over a 40-year period.

Application of the values of 0.0016 per million estimated from the OSHA compliance information and the value of less than 0.0000001 per million predicted from the actual consumer exposure data to the present U.S. population of about 250 million persons yields calculated excess deaths of 0.4 and less than 0.00003, respectively, over a 40-year time span. It should be noted particularly that the value of 0.4 is based on the maximum not the average exposure values reported by OSHA, and the assumption that the entire population is exposed at this maximum level during substantial installation of drywall in two rooms. To the extent that these conditions are not met, the risk would be less.

The Consumer Product Safety Act requires a finding of an "unreasonable risk" as a basis for the banning action by the Commission. The following listing of U.S. deaths from various causes is provided for reference:

Type of Accident or Cause	U.S. Deaths*
Bites and Stings	53 (1974)
Lightning	112 (1974)
Suffocation by Food Ingestion	2181 (1974)
Poisoning in the Home	4300 (1975)
Fires in the Home	5100 (1975)
Falls in the Home	8400 (1975)

*From 1976 edition of "Accident Facts" published by the National Safety Council.

As discussed above, the highest excess of risk estimate from the OSHA exposure data was 0.4 asbestos-related deaths over a 40-year period. This is almost 300 times less than the chances of being struck by lightning in a single year and approximately 5,000-20,000 times less than the annual risk from such common consumer hazards as food ingestion, poisoning, fires and falls.

We submit that the risk from consumer exposure to asbestos during joint taping is not an "unreasonable risk" within the meaning of the statute. The evidence available to the Commission contradicts rather than suppors the finding that such a risk exists.

Very truly yours,

John L Myers
for H. B. Rhodes, Ph.D.
Technology Manager

J. F. Collins
Vice-President

HBR/rmm