

CONTAINS NO CBI

Monsanto

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8EHQ-1092-8563

October 1, 1992

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Office of Toxic Substances
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460

92 OCT -7 AM 8:47

Attention: Section 8(e) Coordinator

Dear Sir/Madam:

The following information is being submitted to the U.S. Environmental Protection Agency in accordance with EPA's interpretation of Section 8(e) of the Toxic Substances Control Act. This submission should be deemed to discharge any Section 8(e) responsibilities that might exist and should be processed in accordance with EPA's "substantial risk" procedures.

Monsanto manufactures, uses, and sells Vanadium Hydroxide Oxide Phosphate, a chemical having the CAS Registry Number 65232-89-5, under the trade name E-326 Catalyst. We have received a series of TSCA 8(e) allegations concerning this product. A review of these allegations, presented below, has been prepared by our medical staff.

Five laboratory technicians have experienced symptomatic illness after handling small quantities of this catalyst in open laboratory environments. Most of the workers experienced a transient sore throat which was followed in a few hours by general malaise, arthralgias, and myalgias which they have uniformly characterized as flu-like. These symptoms could be sufficiently severe when they persisted overnight to lead to lost work days.

Three of this same five have experienced arthritis primarily involving the interphalangeal joints of hands and feet. The arthritis included pain, fusiform swelling, redness, and tenderness to touch of the involved joints. It was severe enough for two cases to consult Rheumatologists. Another had difficulty removing her rings. Yet another was unable to wear sturdy shoes and had to



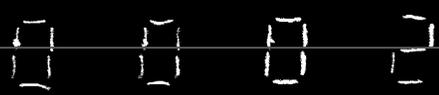
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increase the size of shoes he wore. All signs and symptoms reversed after the person no longer worked with the material.

Plant laboratory technicians routinely wear gloves when handling this catalyst. Steps to prevent inhalation exposure such as using an exhaust hood have been observed to prevent symptoms even when the same manipulations were performed. The symptoms above have occurred after what would appear to be minimal exposures, i.e. handling gram quantities without noticeable dusting. Three of the five people so far interviewed have, however, noted an odor that persisted for hours to days after their work with the material had finished.

Other workers that remove spent catalyst from the production units and repack those units with fresh catalyst have not complained of these same symptoms. However, they have been required to wear disposable dust masks, gloves, and protective clothing. Workers have experienced chest tightness, wheezing and cough that can last up to a few days when they were not careful to properly seat their respirators on their face. These maintenance workers in the production area have not been directly queried about the flu-like syndrome and arthritis of which the laboratory workers have complained.

Searches of the generally available medical literature do not reveal effects such as the laboratory workers have experienced from any vanadium compounds. The symptoms in the production area maintenance workers are consistent with the well known pulmonary effects of vanadium pentoxide.

The apparent relationship between exposure to trace amounts of fume or dust from this chemical complex is far from proven. The exceptional consistency of signs and symptoms among the first five cases which have come to light was believed to require action and reporting.

Additional medical investigations will be conducted to better understand this issue. In the meantime, we have implemented additional industrial hygiene control measures in the laboratory (gloves, respirators, and moved operations into fume hoods where possible) to reduce dermal and inhalation exposure to this product. Our MSDS will also be updated in the near future to communicate these findings to all workers who have exposure potential.

Sincerely,

James E. Downes /dc

James E. Downes
Manager, Product Safety

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