

MK# 302177

DuPont Performance Elastomers L.L.C.
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Wilmington, DE 19809

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DuPont
Performance Elastomers

January 30, 2007

Via Federal Express

Document Processing Center (Mail Code 7407)
Room 6428
Attention: 8(e) Coordinator
Office of Pollution Prevention and Toxics
U.S. Environmental Protection Agency
1201 Constitution Ave., NW
Washington, D.C. 20460

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Dear 8(e) Coordinator:

RE: Melt Blend Mixture of
66.3% Vinylidene fluoride-hexafluoropropene polymer (CAS 9011-17-0) and
33.7% Benzyltriphenylphosphonium chloride (BTPPC) (CAS 1100-88-5)

This letter is to inform you of the results of a recently completed acute oral toxicity test in rats with the above referenced test material.

Resin pellets of the melt blend mixture (approximately 4-mm cubes) were cryogenically milled to a powder (300-500 µm particle diameter by sieving) to allow administration through a gavage needle. A single dose of the cryogenically milled material was administered by oral gavage to a total of six, fasted female rats; three at a dose of 55 mg/kg and three at a dose of 175 mg/kg. The rats were observed for up to 14 days after dosing and then subjected to gross pathological examination.

One of three rats dosed at 175 mg/kg was sacrificed in a moribund condition on the day of dosing and the remaining two were found dead on the day of dosing. No deaths occurred in the three rats dosed at 55 mg/kg. Two rats dosed at 55 mg/kg exhibited high carriage, diarrhea, and/or hair loss. One rat dosed at 175 mg/kg exhibited clear oral discharge, diarrhea, stained fur/skin, wet fur, and moribundity. The surviving rats exhibited no body weight losses after dosing and there were no test mixture-related gross lesions found in any animal. Under the conditions of this study, the oral LD50 for the test mixture was 98 mg/kg for female rats.



The BTPPC component was the subject of TSCA 8(e) filing (8EHQ-88-7900296), being identified as a highly toxic material by ingestion (oral LD50 in rats of 43 mg/kg). The acute toxicity observed with the test material appears to be consistent with that solely of the BTPPC component.

The test melt blend mixture is only available as a preparation of ~4 mm cubes for use as a compounding agent in fluoroelastomer-based polymers. The large physical size of the cubes precluded ingestion by test animals so cubes were specially ground (cryogenic milling) to a much smaller size. Since the resulting powder was about 1/10 the diameter of the cubes, the expected surface area of the powder for a given weight of mixture would be increased about 1000-fold compared to cubes (assuming spherical, non fractured particles). If fractured due to the cryogenic milling, the actual surface area of the material tested could be much greater than 1000-fold higher compared to cubes.

Potential for occupational exposure is minimized by supplying the melt blend mixture for sale as cubes to reduce potential for accidental ingestion or inhalation of dusts. While the increased surface area of the material tested may have artificially influenced the outcome of the acute toxicity study due to greatly increased surface area and thus potential exposure to BTPPC, we have changed our shipping classification for this mixture, and revised our MSDS and product label by providing

- LD50 information from the feeding study
- Comments relative to the toxicity findings of the study as related to the product
- Changes to protective equipment consistent with the finding of the study
- Changes to the first aid recommendations consistent with the new information.

Sincerely,

A. Michael Kaplan /cp

A. Michael Kaplan, Ph.D.
Agent for DuPont Performance Elastomers, L.L.C.
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Newark, DE 19714