U.S. Department
of Transportation
**Research and
Special Programs
Administration**

400 Seventh St., S.W.
Washington, D.C. 20590

MAR - 9 2004

Mr. Wade A. Winters
Regulatory Resources, Inc.
240 Joshua Road
Kennewick, WA 99338

Ref. No. 04-0017

Dear Mr. Winters:

This responds to your January 14, 2004, letter requesting clarification on the classification criteria for toxic materials under the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). Specifically, you ask if your urethane polymer product containing 89% bifenthrin, when shipped in a solid pancake disk form, meets the defining criteria in § 173.132(d) for a Division 6.1 material at the Packing Group III level.

According to the material safety data sheet enclosed with your letter, the toxic constituent (bifenthrin) in your urethane polymer product does meet the defining criteria in § 173.132(d) for oral toxicity. However, you indicate that the physical form of the product that contains the toxic material makes poisoning unlikely. You state that, given the physical form of the product, which is a solid pancake-shaped disk approximately 4 inches by 4 inches and 0.125 inch thick, the product does not meet the defining criteria in Part 173 and, thus, does not pose a risk in transportation.

Based on the information provided, it is the opinion of this Office that, when shipped in the solid disk form, the bifenthrin contained in your urethane polymer product does not pose a risk in transportation because the bifenthrin is completely contained in the urethane polymer product. As you note, exposure to or ingestion of the bifenthrin contained in the urethane polymer product is extremely unlikely to occur. Therefore, in its solid disk form, your product does not meet the definition of a hazardous material and is not subject to the HMR.

I hope this answers your inquiry.

Sincerely,

Susan Gorsky
Senior Transportation Regulations Specialist
Office of Hazardous Materials Standards

040017

173.132

Boothe
§173.132
Definition
04-0017
Haz
class

Regulatory Resources, Inc.
"The Source You Come Back To"

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January 14, 2004

Mr. Edward T. Mazzullo
U.S. Department of Transportation
Office of Hazardous Materials Standards
DHM-10
400 7th St., S.W.
Washington, DC 20590-0001

Dear Mr. Mazzullo,

Regulatory Resources, Inc. (RRI) is requesting a classification determination in accordance with 49 CFR 173.132(d) of a urethane polymer product that is considered toxic (PG III) for transport when at a 23.75% concentration or greater. RRI is a small business that provides training and consulting in domestic and international hazardous materials transport regulations and domestic hazardous waste management regulations.

A question recently arose as to the applicability of toxicity when the route and means of toxicity is unlikely. The question concerns a polymerized urethane product. The physical attributes of the product are basically like that of the Rhino Linings® sprayed in truck beds. The primary urethane product is a pancake shaped disk approximately 4 inches by 4 inches and 0.125 inch thick. Two other product sizes may also be available: one inch squares and sheeting 12-24 inches wide (picture attached).

The toxicity constituent in the urethane product is the pesticide bifenthrin (MSDS attached). Bifenthrin, at 89%, has an oral LD_{50} (rat) of 53.4 mg/kg and an inhalation toxicity (rat) of 3.2 mg/L (adjusted for a one hour exposure). The concentration of bifenthrin in the urethane product does not exceed 40%. The DOT Hazardous Material Regulations in 49 CFR 173.132(b)(3)(iii) and RPSA have already indicated that the inhalation toxicity route is not applicable since the urethane product containing the pesticide material, in transport, is not respirable as a dust nor available as a vapor (vp <1.8E-7mm Hg @ 25°C).

> "Your zinc dimethyldithiocarbamate shipped as a dust is classified as a poisonous material because it meets the acute inhalation toxicity criteria in §173.132 for Class 6, Division 6.1 material. When shipped in the micropearl form, the zinc dimethyldithiocarbamate does not meet the toxic criteria (oral, dermal, and inhalation)..." [Letter, RSPA to Ms. Denese A Deeds, CIH, 1995]

> "If your hazardous material is in a form due to its low vapor pressure such that it cannot readily vaporize or mist under conditions normally incident to transportation, then that route of exposure does not have to be considered in the determination of whether or not it is a poison under the HMR." [Letter, RSPA to Mr. James R. Barrett, January 29, 1997]

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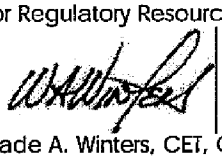
Although the oral toxicity test data indicates the material is toxic, the physical form of the product which contains the pesticide makes poisoning unlikely. To ingest the product someone would have to physical bite a piece of the urethane product, a feat requiring the jaw strength of a pit bull. Even ingestion of the one inch square urethane product would require persistent effort. The urethane product would, if deliberate ingestion occurred, not likely cause acute poisoning since it is not digestible. Further, bifenthrin itself has moderate stability in soil and is not mobile. In the unlikely event of a release in transport, environmental concerns are basically eliminated since the pesticide is bound in the urethane product (one purpose of this product is direct application to soil as a sheeting barrier for insects).

Given the physical nature of the urethane product containing the bifenthrin, RRI seeks RSPA's opinion concerning the classification of the product to the Division 6.1 toxicity criteria. RRI believes the product is in a form that does not pose a risk under conditions normally incident to transportation.

I appreciate you attention to this matter. Please contact me if you have any questions or require additional information.

For Regulatory Resources, Inc.,



Wade A. Winters, CET, CHMM
President

Enclosures

WAW/lom