



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

JUL 18 2003

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

Officer George Barber, CHPO, 10665
Department of California Highway Patrol
California Highway Patrol, Valley Division
11337 Trade Center Drive
Rancho, Cordova, CA

Ref. No.: 03-0146

Dear Officer Barber:

This responds to your June 6, 2003 letter regarding the segregation requirements under the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180), as they apply to various chemicals transported in the same vehicle. You enclosed copies of several photographs of boxes on pallets inside the vehicle.

While performing an inspection on a vehicle transporting hazardous materials classed as Division 6.1 (poison), PG I, Poison Inhalation Hazard, Zone B; Class 3 (flammable liquid); Class 8 (corrosive); Division 4.1 (flammable solid); Division 4.3 (dangerous when wet); and Division 5.1 (oxidizers), you discovered that the van was refrigerated and had a metal ribbed floor. The ribs are approximately 1-inch wide and 1-inch deep. The ribbed floor allows cold air to circulate around the product to maintain a constant temperature, and also allows melting ice to drain to the back of the van and out through the rear doors. You asked if hazardous materials in boxes on wooden pallets placed on a "ribbed floor" would be considered proper separation, sufficient to prevent commingling of liquid chemicals.

Hazardous materials may not be loaded, transported, or stored together, except as specified in the "Segregation Table" in §177.848(d). The provisions for separation can be met by placing barriers (i.e., impediments, obstructions, dividers, packages of non-hazardous materials, or intervening space) between packages inside of the transport vehicle or freight container that prevent commingling of materials in the event of leakage from the packages. Regardless of the methods of separation used, Class 8 (corrosive) liquids may not be loaded above or adjacent to Class 4 (flammable solid) or Class 5 (oxidizing) materials; except that shippers may load truckload shipments of such materials together when it is known that the mixture would not cause a fire or a dangerous evolution of heat or gas (see §177.848(e)(3)).

The hazardous materials mentioned above are not prohibited from being transported in the same vehicle. Boxes shrink-wrapped on pallets, separated by intervening space or packages containing non-hazardous materials, satisfy the requirement for "separation." Whether the boxes on wooden pallets are



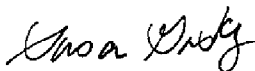
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177.848

on a "ribbed floor" is not relevant in determining that the requirement for "separation" is being met. A material poisonous by inhalation leaking from a package can emit toxins that permeate or spread throughout areas of a van or transport vehicle, and can be immediately harmful to any persons entering the van or vehicle.

I hope this satisfies your inquiry. If we can be of further assistance, please contact us.

Sincerely,



Susan Gorsky
Senior Transportation Regulations Specialist
Office of Hazardous Materials Standards

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Engram
§177-848
Segregation
03-0146

June 6, 2003

File No.: 010665

To: U.S. Department of Transportation
Research and Special Programs Administration
400 Seventh Street S.W.
Washington, DC 20590

From: Officer George Barber 10665

Please provide a letter of interpretation on the following issues relating to incompatible chemicals transported in the same vehicle.

While performing a vehicle inspection on a vehicle transporting hazardous materials classed as division 6.1, PGI, Poison Inhalation Hazard Zone B, Class 3, Class 8 liquid, Division 4.1, Division 4.3, and Division 5.1. I discovered that the vehicle in use was a refrigerated van with a metal ribbed floor. The ribs were approximately one inch wide and one inch deep. The purpose of the ribs is two fold. First, the ribs allow the cold air to circulate around the product in transit to maintain a constant temperature. Second, the ribs allow melting ice to drain to the back of the van and out through the rear doors.

My questions are as follows:

- (1) In reading previous letters of interpretation, I understand that segregation must be accomplished by a non-permeable barrier, absorbent material, or non-reactive freight. Considering the nature of the floor, would a barrier of wood pallets on the top of the ribs be sufficient to prevent commingling of liquid chemicals?
- (2) Considering the nature of a material poisonous by inhalation, if the material were to leak could the toxins permeate the open area of the van and react with other chemicals that may leak?