



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

JUN 24 2003

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

Ms. Tramy Lieu
Lansmont Corporation
1287 Reamwood Avenue
Sunnyvale, CA 94089

Reference No.: 03-0090

Dear Ms. Lieu:

This responds to your letter requesting clarification of the requirements for testing of packagings under the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). Your questions pertain to a 4G combination packaging with a glass inner packaging that contains a PG I liquid with a specific gravity (SG) of 1.7. The gross weight of the combination packaging is 14.3 kilograms. Your questions are paraphrased and answered as follows:

- Q1. The packagings are drop tested from a height of 2.6 m, calculated per § 178.603(e)(2)((ii)(A) with water replacing the hazardous material. Must the packagings be drop tested at the gross weight of 14.3 kg?
- A1. The answer is no. The increased drop height is used to simulate the higher specific gravity.
- Q2. May water be used in lieu of the hazardous material in the vibration test?
- A2. Yes, water may be used to perform testing to determine if a non-bulk packaging is capable of passing the vibration standard.
- Q3. Does 49 CFR contain a formula for calculating the maximum gross weight of a package if the specific gravity and drop height are defined.
- A3. The answer is no, there is no formula to calculate the maximum gross weight of a package if the specific gravity and drop height are defined. The drop height is based on the packing group and specific gravity of the material, not on "gross package weight." The maximum gross weight that may be marked on a package is based on meeting the required performance test standards, however, the maximum gross mass would be the combined weight of the liquid and the weight of all inner and outer packagings.

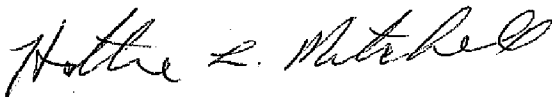


030090

178.601

I trust this satisfies your inquiry.

Sincerely,

A handwritten signature in cursive script, appearing to read "Hattie L. Mitchell".

Hattie L. Mitchell
Chief, Regulatory Review and Reinvention
Office of Hazardous Materials Standards



Corbin
§178.601(c)(1)
Testing
03-0090

Mr. Edward Mazzullo
Director, Office of Hazardous Materials Standards
US.DOT/RSPA (DHM-10)
400 7th Street S.W.
Washington, DC 20590-0001

March 24, 2003

Dear Mr. Mazzullo,

Please clarify for me the 4G Combination package containing liquid content & glass bottle as the inner packaging, packing group I, specific gravity 1.7, gross weight 14.3 kg

For the preparation for drop test:

1. Glass bottle is filled with water.
2. Drop at 1.5m x 1.7SG = 2.6 m
3. Do we have to prepare the test samples to the gross weight = 14.3 kg for the drop test. Or the drop height calculated above is already taken care of that?

For the preparation for stack test, we always perform on empty boxes.

What about for vibration test: water will be just ok for the test or also with exact gross weight as claimed?

Also, could you give me a section in CFR 49 about to calculate the maximum gross weight, assuming that the specific gravity & drop height are already defined.

I look forward to your response. You also can reach me at 408-734-9724.

Sincerely,

Tramy Lieu
Lansmont Corporation

Lansmont Corporation • Western Technical Service Center
1287 Reamwood Avenue • Sunnyvale, California 94089 • Phone: (408) 734-9724 • Fax: (408) 734-9762