



U.S. Department  
of Transportation

**Pipeline and Hazardous  
Materials Safety  
Administration**

1200 New Jersey Avenue, SE  
Washington, DC 20590

SEP 17 2019

Mr. Daniel Stoehr  
Daniels Training Services, Inc.  
P.O. Box 1232  
Freeport, IL 61032-1232

Reference No. 19-0060

Dear Mr. Stoehr:

This letter is in response to your May 7, 2019, email requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to the testing of non-bulk packages. Specifically, your email asks for clarification of the non-bulk packaging filling limits in § 173.24a(b). You note that § 173.24a(b)(3) reads “A non-bulk packaging not exceeding 400 kg which is tested and marked for liquid hazardous materials may be filled with a solid hazardous material to a gross mass, in kilograms, not exceeding the rated capacity of the packaging in liters, or gross mass of the package, multiplied by the specific gravity or gross mass of the package marked on the packaging, or 1.2 if not marked.” You seek clarification on the term “gross mass of the package.” You ask whether the formula in § 173.24a(b)(3) allows for a shipper to multiply the actual gross mass of the package by the gross mass marked on the package to achieve a total value that may exceed the actual gross mass of the package.

The answer is no. The intention of § 173.24a(b)(3) is for a shipper to multiply the rated capacity of the package by the marked specific gravity and fill to a maximum of that calculated mass, in kilograms, or the 400 kg maximum, whichever is less. PHMSA may provide further clarification of this section in a future rulemaking action.

I hope this information is helpful. Please contact us if we can be of further assistance.

Sincerely,

T. Glenn Foster  
Chief, Regulatory Review and Reinvention Branch  
Standards and Rulemaking Division

Andrews  
19-0060

## January, Ikeya CTR (PHMSA)

**From:** Andrews, Steven (PHMSA)  
**Sent:** Tuesday, May 14, 2019 7:41 AM  
**To:** Dodd, Alice (PHMSA); January, Ikeya CTR (PHMSA)  
**Subject:** FW: Clarification of 49 CFR 173.24a(b)(3)

Alice/Ikeya,

I discussed this with Mr. Stoehr. I think a written interpretation is appropriate here. Please log in as an official interp.

Thanks  
Steven

**From:** Daniel Stoehr [mailto:info@danielstraining.com]  
**Sent:** Tuesday, May 07, 2019 2:27 PM  
**To:** Andrews, Steven (PHMSA) <steven.andrews@dot.gov>  
**Subject:** Clarification of 49 CFR 173.24a(b)(3)

I am trying to understand the new regulations.

- **173.24a(b)(3) reads:** (3) A non-bulk packaging not exceeding 400 kg which is tested and marked for liquid hazardous materials may be filled with a solid hazardous material to a gross mass, in kilograms, not exceeding the rated capacity of the packaging in liters, or gross mass of the package, multiplied by the specific gravity or gross mass of the package marked on the packaging, or 1.2 if not marked.
- A formula, of sorts, is provided to calculate if a liquid packaging may be used for a solid HazMat. The formula contains the following variables:
  - Gross mass in kg of the package.
    - This can be measured or estimated based on information available to the shipper.
  - Rated capacity of the packaging in liters.
    - This can be determined from the packaging specifications.
  - Gross mass of the package.
    - **This reference is the source of my confusion.**
  - Specific gravity or gross mass of the package marked on the packaging.
    - Either of these values will be marked on the packaging.
  - Specific gravity of 1.2 if packaging is not marked.
    - This value is a constant.
- My reading of the formula indicates that a possible option is to multiply the gross mass of the package by the gross mass of the package marked on the packaging in order to achieve a value that must exceed the gross mass of the package.
- I must be confused somewhere.

Please advise.

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