



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue, SE
Washington, D.C. 20590

JAN 02 2013

Ms. Kathy S. Gentry
P.O. Box 244
Sadorus, IL 61872

Ref. No. 11-0282R

Dear Ms. Gentry:

This responds to your October 24, 2011 letter requesting clarification on the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180), and provides additional clarification on your question 3 and our response to that question. Specifically, in your initial letter, you asked for clarification on the package testing scenarios as follows:

Q1. An open head steel drum is purchased with the marking UN1A2/X30/S/. It is your understanding that when a material is placed directly into the drum, the package is considered a "single package." No additional package testing is needed if the material is compatible with the drum and the gross weight is equal to or less than 30 kg. However, if any other type of packaging is used (bottles, vials, cans, etc.) for the material and then this packaging is placed into the drum, then the package is now a "combination package." Combination packages must be tested to ensure the inner packaging and outer packaging together are of sufficient means to safely contain their contents and must be retested every 24 months. You seek confirmation that your understanding is correct?

A1. In accordance with § 178.602(a), each packaging and package is required to be closed in preparation for testing and tests to be carried out in the same manner as if prepared for transportation. It requires testing in both the single and combination packaging configuration. You must ensure that it has been tested for your material and in the configuration which you are using. However, it should be noted that an authorized single packaging for a hazardous material may contain inner receptacles which are compatible with the lading and do not affect the performance of the specification packaging. This packaging may remain marked as a single packaging and need not be retested. The completed package must meet the general packaging requirements of Part 173, Subpart B. (See §§ 173.21(e) and 173.24).

Q2. A UN4GV box is purchased. None of the components used in the original testing are purchased for use. The shipper wants to use its inner containers and components. It is your understanding that the 4GV must be used with the components that it was tested with. Although in some instances the shipper may use their own inner container, the other components (tape, vermiculite, dividers, etc.) have to be used. You seek confirmation that your understanding is correct?

A2. Your understanding is correct. However, a UN4GV is a variation packaging. Section 178.601(g)(2) provides for selective testing of combination packaging that differ only in minor respects from a tested type. The UN4GV combination packaging must adhere to the provisions in § 178.601(g)(2).

Q3. When a UN certified package is used, the testing limits are set not by the total quantity of material, but by the number of units. It is your understanding that if the 4GV from Q #2 has been tested for one 16 oz bottle, then only 1 unit of up to 16 oz can be shipped in the package. You cannot ship 20 units of lesser amounts to add up to 16 oz or less OR any other combination that adds up to 16 oz. You seek confirmation that your understanding is correct?

A3. Your understanding is correct. Section 178.601(g)(2)(ii) does not authorize this as the combined gross mass of the inner packaging would need to be reduced to not exceed one half of the inner packaging used for the drop test.

Q4. If someone is filling a container that is to be used as an inner packaging, but they are not given a choice as to which container to use (inner packaging has already been decided and is not changed without consent), do they have to be trained on packaging?

A4. Yes. Filling a hazardous materials packaging is a function that directly affects hazardous materials transportation safety, which is included in the definition of a hazmat employee in § 171.8. All hazmat employees require training in accordance with part 172, subpart H.

I hope this answers your inquiry. If you need additional assistance, please contact this office at (202) 366-8553.

Sincerely,



Ben Supko
Senior Regulations Officer
Standards and Rulemaking Division

Boothe
§178.601

Boothe, Deborah (PHMSA)

From: Supko, Ben (PHMSA)
Sent: Wednesday, December 05, 2012 8:14 AM
To: 'Jay Johnson'
Cc: Boothe, Deborah (PHMSA); Benedict, Robert (PHMSA)
Subject: RE: Question on a 4GV Interpretation

Testing
11-0282R

Good morning Jay,

The problem/reason for responding in the manner that we did was that the drop test in the requester's question was conducted with a single 16 ounce bottle. Based on the language in §178.601(g)(2)(ii) the combined gross mass of the inner packagings may not exceed **one half** of the gross mass of the inner packaging used for the drop test. So, given that the requester asked to use inners that amounted to the full 16 ounce volume that was tested; § 178.601(g)(2) was not applicable to the particular question asked. Also, based on telephone conversations with the requester we felt that the question was really intended to address the provisions in § 178.601(g)(1).

However, you are correct that we should have made it clear why § 178.601(g)(2) was not authorized for the question posed and why we chose to address the question based on § 178.601(g)(1) rather than § 178.601(g)(2). I certainly see why that resulted in confusion.

To address the specific scenarios you raise we felt that it was important log your request as an interpretation and add clarifying language to letter 11-0282.

Please let me know if you disagree with this approach.

Thanks again,

Ben

From: Jay Johnson [mailto:jayj@inmarkinc.com]
Sent: Wednesday, December 05, 2012 4:46 AM
To: Supko, Ben (PHMSA)
Cc: Boothe, Deborah (PHMSA); Kelley, Shane (PHMSA)
Subject: RE: Question on a 4GV Interpretation

Good Morning Ben,

I appreciate you and your staff getting back to me so quickly on my question of an interpretation. I am currently out of the country at meeting of the UN Sub-Committee of Experts on the Transportation of Dangerous Goods in Geneva. Deborah Boothe of your office left me a message yesterday indicating the interpretation in question was specific to a requestor and the requestor of this interpretation was happy with the current answers. I do not think that addresses the incorrect reference in Q3 of the interpretation.

In the interpretation you answered Q3 about 4GV packaging with an answer referencing Variation 1 in § 178.601(g)(1)(i) but answers to questions on 4GV packaging should be referencing Variation 2 in § 178.601(g)(2). If the correct Variation had been referenced the answer should be change to:

“A3. Your understanding is incorrect, The package variations specified in § 178.601(g)(2) do permit increases in the quantity of the inner packagings as long as they are not greater than the volume tested in the original packaging(s).”

I reference this line from Variation 2 that supports this answer...

The thickness of cushioning material between inner packagings and between inner packagings and the outside of the packaging may not be reduced below the corresponding thickness in the originally tested packaging; and when a single inner packaging was used in the original test, the thickness of cushioning between inner packagings may not be less than the thickness of cushioning between the outside of the packaging and the inner packaging in the original test.

I would appreciate you making this correction.

Best regards,

Jay



Jay Johnson, DGSA | Regulatory Compliance

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From: Ben.Supko@dot.gov [<mailto:Ben.Supko@dot.gov>]

Sent: Tuesday, December 04, 2012 10:16 AM

To: Jay Johnson

Subject: Re: Question on a 4GV Interpretation

Mr. Johnson,

Good morning. I received your voicemail yesterday and have asked the staff member that worked on the letter to follow up with both you and the initial requester. Please let me know if you don't hear anything from COB tomorrow.

Thank you for bringing this to my attention,

Ben

From: Jay Johnson [<mailto:jayj@inmarkinc.com>]

Sent: Tuesday, December 04, 2012 09:34 AM

To: Supko, Ben (PHMSA)

Cc: Kelley, Shane (PHMSA)

Subject: Question on a 4GV Interpretation

Hello Ben,

I left you a voice mail message last week concerning an interpretation on 4GV packaging (Ref. No. 11-0282).

In the interpretation you answered Q3 about 4GV packaging with an answer referencing Variation 1 in § 178.601(g)(1)(i) but answers to questions on 4GV packaging should be referencing Variation 2 in § 178.601(g)(2).

I believe that the answer would be different for Variation 2 because of this line in § 178.601(g)(2)(iii) that allows inner packagings to be used in place of a single inner packaging tested:

The thickness of cushioning material between inner packagings and between inner packagings and the outside of the packaging may not be reduced below the corresponding thickness in the originally tested packaging; and when a single inner packaging was used in the original test, the thickness of cushioning between inner packagings may not be less than the thickness of cushioning between the outside of the packaging and the inner packaging in the original test.

I would like to rephrase the question about 4GV packaging to the following:

Are the limits set by 4GV packaging based on the total volume tested, the marked maximum gross and the minimum thickness of cushioning material?

If a 4GV package was tested with 2 x 1 liter fragile glass bottles, Can a shipper substitute (without the need for further testing) the following inner combinations if the minimum thickness of cushioning material was maintained and the package weighs less than the marked gross mass?

- 4 x 500ml plastic bottles
- Two plastic bags each containing 2 x 500 ml plastic bottles with no minimum cushioning distances maintained within the bag
- 1 x 2 liter plastic bottle
- 2 metal cans each containing 1 x 1 liter glass bottle
- 2 metal cans each containing 2 x 500ml glass bottles with no minimum cushioning distances maintained within the can
- 2 metal cans each containing 1 x 500ml glass bottles

Thanks

Jay



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