



U.S. Department
of Transportation

Pipeline and Hazardous
Materials Safety
Administration

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

APR 05 2013

Mr. Jay Johnson
Regulatory Compliance
Inmark Packaging
675 Hartman Road, Suite 100
Austell, GA 30168

Ref. No.: 13-0017

Dear Mr. Johnson:

This is in response to your January 18, 2013 email requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) concerning the testing of specification packagings. Specifically you seek confirmation of your understanding that variation 2 found in § 178.601(g)(2) permits the testing of a package with a single large inner packaging and substitution of multiple smaller inner packagings without retesting.

Your understanding is correct. Variation 2 permits articles or inner packagings of any type for solids or liquids to be assembled and transported without testing in an outer packaging provided all of the conditions of § 178.601(g)(2) are met. In the case you describe, if a single large fragile inner packaging containing liquids is placed into the outer package and subjected to the required drop test then multiple smaller inner packagings may be substituted for the single large inner packaging without retesting. This is only permitted if the total combined gross mass of the smaller inner packagings does not exceed one-half the gross mass of the large inner packaging used for the original drop test and the thickness of the cushioning material is maintained. Note, the inner and outer packagings must meet also the remaining requirements in § 178.601(g)(2) as appropriate.

I hope this information is helpful. If you have further questions, please do not hesitate to contact this office.

Sincerely,

Delmer Billings
Senior Regulatory Advisor
Standards and Rulemaking Division

Drakeford, Carolyn (PHMSA)

Leary
§ 178.601(g)
Testing
13-0047

From: Supko, Ben (PHMSA)
Sent: Friday, January 18, 2013 12:07 PM
To: Drakeford, Carolyn (PHMSA)
Cc: Boothe, Deborah (PHMSA); Benedict, Robert (PHMSA)
Subject: FW: Question on a 4GV Interpretation

Carolyn,

Good afternoon. Please log this a request for interpretation and assign to Kevin Leary.

Thank you,

Ben

From: Jay Johnson [mailto:jayj@inmarkinc.com]
Sent: Friday, January 18, 2013 11:32 AM
To: Supko, Ben (PHMSA); Boothe, Deborah (PHMSA)
Cc: Benedict, Robert (PHMSA)
Subject: RE: Question on a 4GV Interpretation

Dear Deborah,

I just received your fax regarding interpretation Ref. No. 11-0282R and I appreciate the correction and look forward to your clarification letter to my additional questions.

There has been a lot of discussion on how to use 4GV packaging to meet the new demand for UN specification packaging when shipping lithium batteries. The way the US regulations "appear to be written" you can take the largest single inner packaging and substitute it for lots of smaller inner packagings as long as the thickness of cushioning is maintained and the total combined gross mass of inner packagings does not exceed one-half the gross mass of the inner packagings used for the drop test.

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.

The UK government has a different approach to 4GV packaging. They do not allow testing with lead shot to increase mass, so 4GV packages are tested with only dense liquids. They do allow the substitution of one large primary for a packaging system tested with multiple fragile small inner packagings. So a package tested with eight 1 liter bottles could be used to ship a single 4 liter bottle if everything else was correct.

Best regards,
Jay





Jay Johnson, DGSA | Regulatory Compliance

o +1 770.373.3300 | d +1 770.373.3356 | m +1 770.377.0205 | f +1 770.373.3357 | e jayj@inmarkpackaging.com

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From: Ben.Supko@dot.gov [<mailto:Ben.Supko@dot.gov>]
Sent: Wednesday, December 05, 2012 8:14 AM
To: Jay Johnson
Cc: deborah.boothe@dot.gov; robert.benedict@dot.gov
Subject: RE: Question on a 4GV Interpretation

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).”

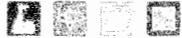
I reference this line from Variation 2 that supports this answer...

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

o +1 770.373.3300 | d +1 770.373.3356 | m +1 770.377.0205 | f +1 770.373.3357 | e javi@InmarkPackaging.com

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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



Jay Johnson, DGSA | Regulatory Compliance

o +1 770.373.3300 | d +1 770.373.3356 | m +1 770.377.0205 | f +1 770.373.3357 | e jayj@InmarkPackaging.com

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