



U.S. Department  
of Transportation

**Pipeline and Hazardous  
Materials Safety  
Administration**

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

**JUN 13 2012**

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

Ref. No. 11-0282

Dear Ms. Gentry:

This responds to your October 24, 2011 letter requesting clarification on the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). Specifically, you ask 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. Inner packagings of equivalent or smaller size may be used provided they meet requirements of § 178.601(g)(1)(i). Furthermore, a lesser number of the tested inner receptacles, or of the alternative types of inner receptacles identified in § 178.601(g)(1)(i) may be used provided sufficient cushioning is added to fill the void space(s) and to prevent significant movement of the inner packagings. The package variations specified in § 178.601(g)(1) do not permit increases in the volume or quantity of the inner packagings.

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,

A handwritten signature in black ink, appearing to read "Ben Supko". The signature is fluid and cursive, with the first name "Ben" and last name "Supko" clearly distinguishable.

Ben Supko  
Senior Regulations Officer  
Standards and Rulemaking Division

October 24, 2011

US DOT  
PHMSA Office of Hazardous Materials Standards  
Attn: PHH-10  
East Building  
1200 New Jersey Ave, SE  
Washington, DC 20590-0001

Boothe  
\$ 172.704  
\$ 178.503  
Packagings  
11-0282

I am presently working with a group of people wanting to start a chemical distribution company. I have 20+ years of experience in shipping hazardous materials, but am finding it hard to convince this group of the regulations. It is for this reason that I am taking the exact instances we have discussed and asking for a clear interpretation of the regulations.

- 1) An open head steel drum is purchased with the marking UN1A2/X30/S/....  
If my understanding is correct, if material is placed directly into the drum, then 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 = or < 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 packagings and outer packagings together are of sufficient means to safely contain their contents and must be re-tested every 24 months.

Can you please comment if my understanding is correct?

- 2) A UN4GV box is purchased- box only. None of the components used in the original testing are purchased for use. The shipper wants to use their inner containers and all their inner components.  
Again, if my understanding is correct, 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.

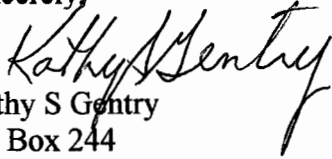
Please comment.

- 3) Testing restrictions- 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. If the 4GV from #3 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.

Please comment.

- 4) Training requirements- 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?

Sincerely,

A handwritten signature in cursive script that reads "Kathy S Gentry". The signature is written in black ink and is positioned to the right of the typed name.

Kathy S Gentry  
PO Box 244

Sadorus, IL 61872