



U.S. Department  
of Transportation  
**Pipeline and Hazardous  
Materials Safety  
Administration**

NOV 19 2007

1200 New Jersey Ave., S.E.  
Washington, DC 20590

Mr. H. Perry Hock  
President and Technical Director  
Hock Package and Product Testing and  
Consulting Inc.  
4090 Thunderbird Lane  
Fairfield, OH 45014

Ref. No.: 07-0153

Dear Mr. Hock:

This responds to your August 7, 2007 letter requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) requirements applicable to packaging test samples. Specifically, you ask about the requirements for using a non-hazardous material in place of a hazardous material when testing sample packagings.

Section 178.602(c) authorizes the use of non-hazardous materials in sample packagings that will be tested in accordance with Subpart M of Part 178 of the HMR. The non-hazardous material must have similar physical characteristics, including the same or higher specific gravity, to the hazardous material for which the packaging will be used.

Requirements for conducting the drop test are specified in § 178.603. Paragraph (c) of this section addresses preparation for the drop test of certain types of plastic packagings. In accordance with this paragraph, packagings must be tested when the temperature of the sample packaging and its contents has been reduced to -18° C or lower. Test liquids must be kept in the liquid state. If necessary to ensure that the test liquid remains in a liquid state, anti-freeze may be added to the test liquid. In this situation, water/anti-freeze solutions with a minimum specific gravity of 0.95 for testing at -18° C or lower are acceptable test liquids. Note that the specific gravity specified in § 178.603(c) applies only when the use of a water/anti-freeze solution is necessary to ensure that the test liquid remains in a liquid state. If the use of a water/anti-freeze solution is not necessary to ensure that the material remains in a liquid state, the requirements specified in § 178.602(c) applicable to the use of non-hazardous materials for testing sample packagings apply.

Sincerely,

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



**gh Package  
& Product  
Testing and  
Consulting, Inc.**

ISO17025  
accredited

4090 Thunderbird Lane  
Fairfield, OH 45014

Phone (513) 870-0080  
Fax (513) 870-0017

335 W. Melinda Lane  
Phoenix, AZ 85027

Phone (623) 869-8008  
Fax (623) 869-8003

August 7, 2007

To: Mr. Edward T. Mazzullo  
Director, Office of Hazardous Materials Standards  
U.S. DOT/RSPA (DHM-10)  
1200 New Jersey Ave. S.W.  
Washington, DC 20590-0001

From: Mr. H. Perry Hock  
President and Technical Director  
gh Package & Product Testing and Company  
4090 Thunderbird Lane  
Fairfield, OH 45014

Satterthwaite  
§178.602(c)  
§178.603(c)  
Testing  
07-0153

Subject: Special preparations of test samples – 178.602 (c), 178.603 (c)

Dear Mr. Mazzullo,

Is it permissible to use a liquid that has a lower specific gravity than 0.95 for combination packagings that contain plastic inners, provided that the gross mass of the test pack exceeds the marked gross mass of the packaging?

In section 178.602 (c), if the hazardous material is replaced with non-hazardous material, the non hazardous material must be the same or higher specific gravity.

In 178.603 (c) – there is a stated minimum for non-hazardous materials to have a 0.95 specific gravity, yet it is still possible to have non-hazardous liquids with a lower specific gravity than 0.95 and still a higher specific gravity than the hazardous material to which they are replacing. In paragraph 178.603 (e), it recognizes liquids that are non hazardous and essentially having the same physical characteristics as the liquid to which they are replacing.

Example: combination pack containing 4 F-style cans

Acetone - specific gravity of 0.78

Non-hazardous solution – specific gravity of 0.88

Tested with Acetone: 14.5 kg (14.580 kg)

Gross mass: 4.088 liters x 4 x 1 kg per liter x 98% x 0.78 SG + 2.081 kg

Tested with 0.88 specific gravity solution: 16.1 kg (16.182 kg)

Gross mass: 4.088 liters x 4 x 1 kg per liter x 98% x 0.88 SG + 2.081 kg

Tested with water: 18.1 kg (18.105 kg)

Gross mass: 4.088 liters x 4 x 1 kg per liter x 98% x 1.0 SG + 2.081 kg

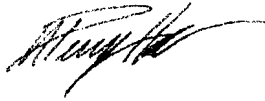
Tested with 0.95 specific gravity solution: 17.3 kg (17.304 kg)

Gross mass: 4.088 liters x 4 x 1 kg per liter x 98% x 0.95 SG + 2.081 kg

It would appear that the 2004 update (published in the 2005 regulations) to 178.603, in my opinion, should have only been applicable to utilizing the provision in 178.603 (e)(2)(ii).

If you have any further questions, please do not hesitate to call me at 513.870.0080 x 103. I look forward to your prompt response.

Yours Truly,



H. Perry Hock  
President and Technical Director  
gh Package & Product Testing and Consulting, Inc.