



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

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

MAY 05 2010

Mr. Robert Eyck  
TEN-E Packaging Services, Inc.  
1666 County Road 74  
Newport, MN 55055

Ref. No.: 09-0263R

Dear Mr. Eyck:

This responds to your October 13, 2009 letter regarding the applicability of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) to non-bulk packaging used to transport hazardous materials. Specifically you ask whether separate tests are required for inner receptacles of combination packagings that are intended to contain both liquid and solids. This is a revision to our original response from December 10, 2009.

The HMR, at § 178.602, require each packaging to be closed in preparation for testing and tests to be carried out in the same manner as if prepared for transportation, including inner packagings in the case of combination packagings. Therefore, a combination packaging design originally tested with inner packagings containing liquids may not be used to package solid materials, as a single package or otherwise, without further testing.

I trust this satisfies your inquiry. Should have any further questions, please contact this office.

Sincerely,

A handwritten signature in black ink, appearing to read "H. Mitchell", written over a horizontal line.

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



Andrews  
§ 173.44a(6)(3)  
Non-bulk Packaging  
Packages  
09-0763

October 13, 2009

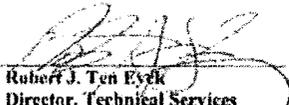
Susan Gorsky  
**U.S. DEPARTMENT OF TRANSPORTATION**  
Pipeline and Hazardous Materials Safety Administration  
Office of Hazardous Materials Standards, PHH-10  
1200 New Jersey Avenue  
SE Building, 2<sup>nd</sup> Floor  
Washington, DC 20590

Dear Susan:

TEN-E Packaging Services, Inc. recently became aware of a DOT letter of clarification, Ref. No. 05-0111, that conflicts with our understanding of what the UN Recommendations on the Transport of Dangerous Goods Model Regulations and Title 49 CFR permit when qualifying combination packagings to the UN standards. We have always advised our clients that separate tests must be conducted for inner receptacles of combination packagings that are intended to contain both liquids and solids. We base this view on Section 173.24a(b)(3) of Title 49 CFR that limits a qualified liquids packaging to be used for solids to only single and composite packagings, Section 6.1.5.2.1 of the UN Recommendations on the Transport of Dangerous Goods Model Regulations that states for combination packagings with inner packagings designed to carry liquids and solids testing must be conducted for each scenario and a 1992 Third Party Laboratory summary of questions and answers (reference Answer to Question #8) that prohibits substituting inner packagings for solids on a liquids qualified packaging. Copies of the referenced documents are attached for your review.

TEN-E Packaging Services would appreciate a quick response to what the agency's position is on this matter as we want to provide our clients with proper advice on this UN packaging certification issue.

Sincerley,



Robert J. Ten Eyck  
Director, Technical Services  
TEN-E Packaging Services, Inc.

TEN-E Packaging Services, Inc.  
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UNITED STATES - MN



U.S. Department  
of Transportation

**Pipeline and  
Hazardous Materials Safety  
Administration**

400 Seventh Street, S.W.  
Washington, D.C. 20590

JUN 17 2005

Ms. Cherie Walton  
Reactives Management Corporation  
1025 Executive Blvd., Suite 101  
Chesapeake, VA 23320

Ref. No. 05-0111

Dear Ms. Walton:

This is in response to your April 28, 2005 letter requesting clarification regarding the general packaging requirements specified under the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). Your questions are paraphrased and answered as follows:

Q1. Is it permissible for a specification combination package (a UN 4G fiberboard box with inner metal receptacles), which was tested for liquids, to be filled with a solid material as long as the gross mass marked on the packaging is not exceeded?

A1. Yes. A combination packaging that was tested with a liquid may be filled with a solid material provided it is an authorized packaging for the solid material and conforms to the general packaging provisions in Part 173, Subpart B.

Q2. If the answer to Q1 is yes, must the inner receptacles be used to contain the solid material?

A2. Yes. The packaging should be prepared in the same manner it was tested.

I hope this information is helpful.

Sincerely,

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



050111

173.24a (b)(3)

Message

Satterthwhite Page 1 of 1

§173.24a(b)(3)

Non-bulk Packagings +  
Packages

05 - 0111

**INFOCNTR <PHMSA>**

**From:** reactives@earthlink.net  
**Sent:** Thursday, April 28, 2005 12:39 PM  
**To:** INFOCNTR <PHMSA>  
**Subject:** Information Center Comments/Questions

Complete by Phone, Left VM to call HMIC 4/28/2005 KAL

Below is the result of your feedback form. It was submitted by  
Cherie Walton (reactives@earthlink.net) on Thursday, April 28, 2005 at 12:38:35.

-----  
Email: reactives@earthlink.net

Name: Cherie Walton

Category: Shippers-General Requirements for Shipments and Packagings (Sections 173.1 - 173.476)

Organization: Reactives Management Corp.

Street: 1025 Executive Blvd., Suite 101

City: Chesapeake

State: Virginia

Zip Code: 23320

Phone: 757-436-1033

Fax: 757-548-2808

Comments: RE: Combination packaging.

We have two sizes of combination packagings which are intended to hold liquids. Each combination packaging consists of inner metal cans (e.g. metal paint cans) with locking rings. These are packed inside a 4GY.

The markings on the outer 4Gs are as follows:

4G/Y9.6/S/04 USA/+AX4033

and

4G/Y38.5/S/05 USA/+AZ4600

According to 173.24a(b)(3), which addresses single or composite non-bulk packaging (not combination packagings), solids may be packed in non-bulk packaging which has been tested for liquids.

Can we use the above 4Gs (since they are marked with an "S") for solids as long as the gross mass in kilograms does not exceed the rated capacity of the packaging in liters?

If so, are we required to pack the solids in the approved inner receptacles (paint cans)?

Thanks for your help.

4/28/2005

- (f) If the outer packaging is intended to contain inner packagings for liquids and is not leakproof, or is intended to contain inner packagings for solids and is not siftproof, a means of containing any liquid or solid contents in the event of leakage shall be provided in the form of a leakproof liner, plastics bag or other equally efficient means of containment. For packagings containing liquids, the absorbent material required in (e) above shall be placed inside the means of containing the liquid contents;
- (g) For air transport, packagings shall comply with 4.1.1.4.1;
- (h) Packagings shall be marked in accordance with 6.1.3 as having been tested to packing group I performance for combination packagings. The marked gross mass in kilograms shall be the sum of the mass of the outer packaging plus one half of the mass of the inner packaging(s) as used for the drop test referred to in (a) above. Such a packaging mark shall also contain a letter "V" as described in 6.1.2.4.

6.1.5.1.8 The competent authority may at any time require proof, by tests in accordance with this section, that serially-produced packagings meet the requirements of the design type tests.

6.1.5.1.9 If an inner treatment or coating is required for safety reasons, it shall retain its protective properties even after the tests.

6.1.5.1.10 Provided the validity of the test results is not affected and with the approval of the competent authority, several tests may be made on one sample.

6.1.5.1.11 *Salvage packagings*

Salvage packagings (see 1.2.1) shall be tested and marked in accordance with the provisions applicable to packing group II packagings intended for the transport of solids or inner packagings, except as follows:

- (a) The test substance used in performing the tests shall be water, and the packagings shall be filled to not less than 98% of their maximum capacity. It is permissible to use additives, such as bags of lead shot, to achieve the requisite total package mass so long as they are placed so that the test results are not affected. Alternatively, in performing the drop test, the drop height may be varied in accordance with 6.1.5.3.5 (b);
- (b) Packagings shall, in addition, have been successfully subjected to the leakproofness test at 30 kPa, with the results of this test reflected in the test report required by 6.1.5.7; and
- (c) Packagings shall be marked with the letter "T" as described in 6.1.2.4.

6.1.5.2 *Preparation of packagings for testing*

6.1.5.2.1 Tests shall be carried out on packagings prepared as for transport including, with respect to combination packagings, the inner packagings used. Inner or single receptacles or packagings other than bags shall be filled to not less than 98% of their maximum capacity for liquids or 95% for solids. Bags shall be filled to the maximum mass at which they may be used. For combination packagings where the inner packaging is designed to carry liquids and solids, separate testing is required for both liquid and solid contents. The substances or articles to be transported in the packagings may be replaced by other substances or articles except where this would invalidate the results of the tests. For solids, when another substance is used it shall have the same physical characteristics (mass, grain size, etc.) as the substance to be carried. It is permissible to use additives, such as bags of lead shot, to achieve the requisite total package mass, so long as they are placed so that the test results are not affected.

6.1.5.2.2 In the drop tests for liquids, when another substance is used, it shall be of similar relative density and viscosity to those of the substance being transported. Water may also be used for the liquid drop test under the conditions in 6.1.5.3.5.