



U.S. Department  
of Transportation

**Pipeline and Hazardous  
Materials Safety  
Administration**

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

FEB 08 2013

Mr. Charles Radev  
Southeast Testing & Engineering  
1325 Capital Circle, Suite D  
Lawrenceville, GA 30043

Ref. No. 12-0250

Dear Mr. Radev:

This responds to your November 5, 2012 email requesting clarification of the testing requirements for a combination packaging containing fireworks (UN0336) authorized by special permit DOT-SP 15615 and transported in accordance with conditions of this special permit and the requirements of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). In your email, in addition to single firework items placed in the authorized 4G box, you describe the following consolidations of fireworks that will be shipped in the 4G box: 1) a product tray (from 1-5 kgs) containing 12-24 small fireworks; 2) a display tray (up to 20 kgs) containing up to 24 large fireworks; 3) a folding carton (from 10 g to 1 kg) containing multiples of one type of small firework; and 4) a clear plastic bag 1 mil thick (from 10 g to 1 kg) containing up to 12 small fireworks. The variation in these consolidations and in the potential number of combinations of fireworks of different shapes and sizes (e.g., cones, cubes, cylinders, etc.) may call for multiple tests to be conducted on completed packages. As permitted in § 178.602(c) for preparation of packages for testing, you intend to substitute the fireworks with bags (packed with sawdust) of two different sizes to replicate both large and small fireworks. Your questions are paraphrased and answered as follows:

Q1. For purposes of packing fireworks in this combination packaging, what is considered the inner packaging? Is it the actual firework article or is it the means of containment for the fireworks (e.g., a bag, carton or tray)?

A1. The bag, carton or tray is considered the inner packaging. According to the operational controls of DOT-SP 15615 (*see* 7(b)), the fireworks must be in inner packagings suitable for retail sale (e.g., plastic wrapped boxes or plastic bags). Furthermore, under Packing Instruction 135, UN0336 fireworks must be packaged in inner packagings (i.e., bags, receptacles, or sheets) with no intermediate packaging necessary and placed in an outer packaging (e.g., a UN4G fiberboard box). The completed package must be tested as a combination packaging (*see* the § 173.62(b) Explosives Table and the § 173.62(c) Table of Packing Methods). Thus the bag, carton, or tray you describe is considered the inner packaging under your packaging

scenarios. Note that single firework items must also be contained in some manner of inner packaging.

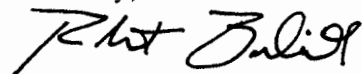
Q2. Does § 178.601(g)(6) provide authorization to use the sawdust-filled bags enclosed in the largest size bag, carton, or tray?

A2. No. Section 178.601(g)(6) is not applicable to your packaging scenarios. It authorizes the application of selective testing Variations 1, 2, and 4 to packagings containing articles where the provisions for inner packagings are applied analogously to the articles. Although your packaging will contain fireworks, which are defined as articles under section § 173.59 (*see fireworks*), the firework itself is not the inner packaging. As directed in our response in A1, the bag, carton or tray you described is considered the inner packaging.

For purposes of your testing, § 178.602(c) authorizes the (hazardous) material (i.e., the fireworks) to be replaced for test purposes with a non-hazardous material (i.e., the sawdust-filled bags). You may then combine this with the selective relief from testing of combination packagings offered under § 178.601(g). For example, under Variation 1 (§ 178.601(g)(1)), variations are permitted in inner packagings of a tested combination package, without further testing of the package, provided an equivalent level of performance is maintained. One such variation is that inner packagings of equivalent or smaller size may be used without further testing of the package provided conditions of § 178.601(g)(1)(A) through (F) are met.

I hope this information is helpful. If you have further questions, please contact this office.

Sincerely,



Robert Benedict  
Chief, Standards Development Branch  
Standards and Rulemaking Division

Der Kinderen  
\$ 178.601 (g)(6)  
Testing

12-0250

**Drakeford, Carolyn (PHMSA)**

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**From:** INFOCNTR (PHMSA)  
**Sent:** Monday, November 05, 2012 3:51 PM  
**To:** Drakeford, Carolyn (PHMSA)  
**Subject:** FW: Request for Interpretation on 178.601 (g) (6) from Southeast Testing & Engineering

Hi Carolyn,

We received the following request for a formal letter of interpretation.

Thanks,  
Victoria

**From:** Charles Radev [<mailto:chradev@setelab.com>]  
**Sent:** Monday, November 05, 2012 12:54 PM  
**To:** INFOCNTR (PHMSA)  
**Subject:** Request for Interpretation on 178.601 (g) (6) from Southeast Testing & Engineering

Dear Info Center Specialist,

We have been asked to test and certify fireworks for large customer. They have been granted a Special Permit that allows them to test packages as heavy as 250 kg as a 4G package.

The issue at hand comes from the need to ship and repackage and test five or more pallet loads of actual product for the purpose of testing on each outer container.

Another issue lies in the fact that customer will be shipping a different combination of inner packages, all contained in four basic types of intermediate packaging -

1. Product trays (from under 1 kg, 13" x 6" x 1" to over 5 kg, 38" x 14" x 3") these combine a dozen or two of smaller firework articles
2. Display Trays (up to 72" x 28" x 8" and up to 20 kg) these combine up to two dozens of larger firework articles
3. Folding cartons (from 10 grams to 1 kg) - these contain multiples of one kind of smaller firework articles
4. Bags of product (loose clear plastic bags, 1 mil thick with or without display cards stapled to them, from 10 grams to 1 kg of contents) - these combine up to one dozen smaller firework articles
5. Single firework items (small or large, from 20 grams to 2 kg)

All of these contain several geometric shapes of individual firework articles, which can be listed as cylinders, cones, cubes, hexagons, pentagons, bottle shaped and rounded extrusions of some shape. All of these contain the same firework material with ignition fuses.

In following the direction of 178.602 (c) and namely, "matching the specific gravity and grain/particle size" we have identified that the most appropriate substitute for these articles is sawdust, which can be easily packed in PE bags of two different sizes to resemble larger and smaller firework items.

We would like to ask for an interpretation of the following:

A) In the case of fireworks, what is considered an "inner packaging"? The actual firework article, which has an ignition fuse and is not meant to be opened nor taken apart but only ignited, or the carton/bag/tray which contains a group of these articles?

and

B) 178.601 (g) (6) "The provisions in Variations 1, 2, and 4 in paragraphs (g)(1), (2) and (4) of this section for combination packagings may be applied to packagings containing articles, where the provisions for inner packagings are applied analogously to the articles. In this case, inner packagings need not comply with § 173.27(c)(1) and (c)(2) of this subchapter. " and namely,

if that allows us to use these substitute bags filled with sawdust and enclosed in the largest size

- product tray,
- display tray,
- folding carton,
- bag of product,

For the purpose of our testing, a sufficient quantity of these would be placed in the carton/ display tray/ bag and then in the outer container to be tested in a way to match the maximum weight of the corresponding articles in the actual shipped outer package.

Very Respectfully,

Charles Radev, President, CEO  
Southeast Testing & Engineering

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