



U.S. Department
of Transportation

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1200 New Jersey Ave., SE
Washington, DC 20590

Pipeline and Hazardous Materials
Safety Administration

Mr. Jason Stevens
Strem Chemicals, Inc.
7 Mulliken Way
Newburyport, MA 01950-4098

Ref. No. 08-0224

Dear Mr. Stevens:

This responds to your May 21, 2008 letter to our Office of Hazardous Materials Enforcement and your August 19, 2008 email and telephone discussions with a member of my staff requesting clarification of the applicability of selective testing of a combination package under § 178.601(g) of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). Specifically, you request clarification of the use of "Variation 4" in combination with "Variation 1."

Your company uses a combination package design-type that has been successfully tested for both liquids and solids at the Packing Group I level. The combination package consists of a slotted fiberboard box containing four half gallon glass bottles and vermiculite as cushioning material. You indicate your company also uses a smaller version of the tested design-type. Both the outer dimensions and glass bottles are smaller than the original. The smaller version includes steel cans as an intermediate packaging into which the glass bottles are placed to provide an improved level of safety. Additionally, for certain shipments, plastic bottles are substituted for the glass bottles. Your understanding is that this packaging configuration is allowed, without having to test the combination package, in conformance with the combined use of Variation 4 and Variation 1 (§§ 178.601(g)(4) and 178.601(g)(1), respectively).

Your questions regarding the smaller version of the combination package design-type are paraphrased as follows:

Q1. May the steel can be substituted for the glass bottle as the inner packaging?

A1. No. Based on the description and pictures of the combination package you provided, the steel can may not be substituted for the glass bottle. Section 178.601(g)(4) allows the use of outer packaging conforming to all of the conditions in Variation 4 without testing to transport inner packagings substituted for the originally tested inner packagings if the substituted inner packagings conform to all the conditions in Variation 1. It is the opinion of this Office that the steel can does not meet all of the conditions in Variation 1. Specifically, the steel can is not of similar design to the glass bottle (e.g., the bottle has a tapered neck),

and the steel can does not have the same opening and the closure is not of similar design. That is, the steel can opening is larger than the glass bottle opening and the steel can closure is a friction lid versus a taped screw cap for the glass bottle.

Q2. May the steel can be used as an intermediate packaging for the smaller-sized glass bottle?

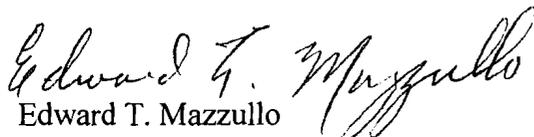
A2. No. Neither Variation 1 nor Variation 4, §§ 178.601(g)(1) and 178.601(g)(4), respectively, allows the use of intermediate packaging as a condition for not having to test the combination package.

Q3. May the steel can be used as an intermediate packaging for a smaller-sized plastic bottle substituted for the glass bottle?

A3. See answer to Q2. However, excluding the intermediate packaging of the steel can, a plastic bottle in conformance with all the conditions of Variation 1 may be substituted for the glass bottle. For example, as a condition of Variation 1, the shipper must ensure the plastic bottle offers resistance to impact and stacking forces equal to or greater than the glass bottle (§ 178.601(g)(1)(i)(B)).

I hope this information is helpful. Please contact us if you require additional assistance.

Sincerely,


Edward T. Mazzullo
Director, Office of Hazardous
Materials Standards

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§ 178.601(g)
Testing
08-0224

Mr. Mazzullo:

I am sending you a few questions that arose following a DOT inspection of our facility in Newburyport, MA on May 7, 2008. Three Probable Findings were listed in the Exit Briefing, Report Control Number: 08422018, one of which was remedied immediately. The other two have initiated some interesting conversations between the DOT inspectors, myself, and other colleagues I have spoken with. Clarity on this matter would be very helpful as it will decide how Strem Chemicals' interprets the regulation. I have included a scenario along with three questions in which it can be assumed all other functions are properly met:

Scenario: A shipper has boxes tested with four ½ gallon glass bottles containing both liquids and solids at a Packing Group I level for fragile inner packagings. After receiving a successful test report, the Shipper has boxes made up consistent with the report, but also elects to have smaller versions (outer dimensions) of the box made up in harmony with 49CFR 178.601(g)(4), "Variation 4". The Shipper then notes that 178.601(g)(4)(iii) states the use of inner packagings "are identical" except their size may be less. The Shipper, in an effort to ensure improved safety, wants to prepare a shipment using a small glass bottle, but overpacked into a one quart metal can. The Shipper notes that 178.601(g)(4)(v) goes on to provide the additional relief necessary by allowance of substituted inner packagings from the originally tested inner packagings "with the conditions set out in Variation 1 in paragraph (g)(1)". The shipper notes that 178.601(g)(1)(i)(B) states the material of construction of the inner packaging must offer resistance to impact and stacking forces "greater than that of the originally tested inner packaging" which was "fragile" glass bottles. The Shipper concludes that he/she can use the metal can provided that the other requirements set forth in "Variation 1" have been met.

Question #1: From this scenario, can the Shipper send small metal cans as they provide greater resistance than fragile glass bottles?

Question #2: From this scenario, can the Shipper place a small glass bottle into the metal can and send in a sense viewing the inner packaging as glass or metal?

Question #3: From the scenario, can the Shipper place a small plastic bottle into the metal can and ship viewing the inner packaging as metal?

Please feel free to forward this along to the appropriate parties and do not hesitate to contact me with questions in this matter as needed. My sole interest is to ensure that Strem Chemicals is following the regulations properly while placing the safest completed packages into transportation. I appreciate your help in this matter.

Kind regards,

Jason M. Stevens

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