



U.S. Department  
of Transportation  
**Research and  
Special Programs  
Administration**

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

SEP 12 2003

Ms. Candace Graf  
Logistics Specialist  
CERAC Incorporated  
407 N. 13<sup>th</sup> Street  
Milwaukee, WI 53233

Ref. No.: 03-0136

Dear Ms. Graf:

This responds to your letter regarding requirements for reuse of packagings under the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). You asked if packagings may be reused for a material described as "Titanium tetrachloride, 8, UN 1838, PG II, Poison Inhalation Hazard, Hazard Zone B." Subsequently, you provided information on the inner and outer packagings you intend using to ship this product.

In accordance with 49 CFR 173.28, except for a packaging made of paper, plastic film, or textile, a packaging, such as a UN 1A1 or UN 1A2 steel drum, may be reused as long as it is in such condition that it conforms in all respects to the prescribed requirements under the HMR. Metal drums used as single packagings or outer packagings of composite packagings are authorized for reuse only when they are marked with a minimum thickness in millimeters in a permanent manner (e.g., embossed). Packagings which are subject to the leakproofness test of 49 CFR 178.604 must be leakproofness tested prior to each reuse, unless otherwise excepted (see 49 CFR 173.28(b)(7)).

The pictures you provided are unclear. The "inner packaging" is marked both with what appears to be a foreign manufacturer's mark and a USA mark, "1A1/X/1.8/1240/03 USA M5142," and the test pressure is not shown in kilopascals. The letters "USA" may only be applied to a packaging that is manufactured in the U.S. We consider a packaging marked in the U.S. as having been manufactured and marked in the U.S. and suitable for bearing the "USA" symbol. For single packagings intended to contain liquids, the test pressure must be shown in kilopascals rounded down to the nearest 10 kPa of the hydrostatic pressure test that the packaging design type has successfully passed. (see 49 CFR 178.503)

A packaging manufacturer conducts periodic retests as a quality control measure for newly manufactured packagings. During subsequent production of packagings of that design, periodic retests must be performed at least once every 12 months for single or composite packagings. A test report must be completed for each packaging design qualification test and each periodic retest. The requirements in 49 CFR 178.601(l) set forth the information that must be included in each test report.



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173.28

A material described as "Titanium tetrachloride, 8, UN 1838, PG II, Poison Inhalation Hazard, Hazard Zone B," must be packaged in accordance with §173.227. Paragraph (c) of that section authorizes the use of certain single packages (UN 1A2, 1B1, 1N1, and 6HA1, which may be used without being further packed in a UN 1A2 or 1H2 drum) that conform to the performance test requirements of subpart M of Part 178 at the Packing Group I performance level, and that:

- (1) comply with the applicable requirements of paragraph (b) of 173.227 (e.g., minimum thickness of a 1A1 steel drum with a capacity of greater than 30 L but less than or equal to 120 L is 1.08mm);
- (2) are loaded by the shipper – without double stacking the drums – and blocked and braced within the transport vehicle and sealed in the transport vehicle; and
- (3) are shipped from one origin to one destination only without any intermediate pickup or delivery.

For materials poisonous by inhalation, a single or composite packaging authorized in 49 CFR 173.227 further packed in a "UN 1A2 or 1H2" drum is not considered an "overpack." An overpack as defined in 49 CFR 171.8 means an enclosure that is used by a single consignor to provide protection or convenience in handling a package or to consolidate two or more packages.

I hope this satisfies your inquiry. If we can be of further assistance, please contact us.

Sincerely,



Susan G. Gorsky  
Senior Transportation Regulations Specialist  
Office of Hazardous Materials Standards

**CERAC**<sup>TM</sup> incorporated  
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Engram  
§ 173.28  
Reuse Packagings

03-0136

Office of Hazardous Materials Standards, RSPA  
Attn: DHM-10, U.S. Department of Transportation  
400 7<sup>th</sup> Street SW.,  
Washington, DC 20590-001


We are looking to ship Titanium Tetrachloride, a Poison Inhalation Hazard, Hazard Zone B, to a customer in California. The customer would like us to use the combination package mentioned in 173.227(b), essentially the drum within a drum provision.

The inner packaging will be the drum (picture provided) marked 1A1/X1.8/1240/03 USA M5142 provided to us from our customer and the outer "overpack" drum would be purchased from Skolnik (picture also provided). While I believe this is acceptable per the regulations, they would like us to continue to reuse these two drums over and over for their shipments. We typically use the customer's common carrier, Roadway, and it is not exclusive use. My question is, does the inner drum which will actually contain the liquid have to be re-tested without failure in accordance with 178.604 for the leakproofness test and be marked with the letter "L" each time before we wish to refill it? If we decide to go exclusive use, does that mean we do not have to re-test the leakproofness test every time before re-filling?

Can we use the overpack drum be used continuously without being re-tested every shipment? Do these drums need to re-tested every year because they are considered a single package or every two years because they are considered a combination package? As the shipper, is this our responsibility to have these tests done each time on the inner drum or the customers? Can we have the customer be responsible for the testing and have them provide documentation to us each time? Does the overpack drum still require the "Inner packages comply" marking even though the outside package is rated?

Thank you for your attention to the above points as we would like to make sure all regulations have been covered in this situation before we start shipping in this manner.

Sincerely,

  
Candice Graf  
Logistics Specialist