



U.S. Department  
of Transportation

**Pipeline and Hazardous  
Materials Safety  
Administration**

1200 New Jersey Avenue, SE  
Washington, DC 20590

**JUN 29 2018**

Mr. Jaime Suarez  
Advisory Engineer  
Crown Technology  
Crown Packaging Technology, Inc.  
11535 South Central Avenue  
Alsip, IL 60803-3418

Reference No. 18-0006

Dear Mr. Suarez:

This letter is in response to your January 5, 2018, email requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to the buckle ranges for a Department of Transportation (DOT) DOT 2P1. Specifically, you ask for confirmation of the buckle/burst pressure requirements of the DOT 2P1 aerosol container.

The Pipeline and Hazardous Materials Safety Administration (PHMSA) issued a final rule on January 21, 2016 under Docket No. PHMSA-2013-0042 (HM-233F) requiring all standards for a DOT 2P1 to remain the same as those for a DOT 2P, except the DOT 2P1 must also comply with the variations prescribed in § 173.33c-2. For a DOT 2P1 to comply with § 178.33c-2, Variation 1, one container out of each lot of 25,000 containers or less, successively produced per day, complete with ends assembled (and without a pressure relief system assembled) must be pressure tested to destruction at gauge pressure and must not burst below 240 psig. The lot must be rejected if containers with a pressure relief system described in § 178.33c-2(a) and assembled show failure at a location other than the pressure relief system. For those containers with an end expansion device, the lot must also be rejected if the container bursts prior to buckling of the device.

You note how the buckle ranges for DOT 2P1 in § 178.33c-2 differ from those prescribed in DOT Special Permit (SP) 7951. DOT-SP 7951 specifies that one out of each case lot of 10,000 cylinders or less that comply with this special permit must be pressure tested to destruction. The entire lot must be rejected if failure occurs at pressure below 175 psig and over 210 psig, or failure occurs at other than the rim-venting release device or dome expansion device.

PHMSA chose to adopt the modified DOT 2P container design prescribed in DOT-SP 13601, which complies with the DOT 2P container and variations prescribed in § 178.33c-2, as the new DOT 2P1 design. In the HM-233F final rule, PHMSA states the reasons for this are:

- PHMSA found DOT-SPs 7951, 13601, and 14503, which authorized modified manufacturing and testing requirements for packagings similar to DOT 2P, lacked specific information on the relationship between each aerosol's functional range and tested burst pressure.
- PHMSA found DOT-SPs 7951 and 14503 established a standard for content pressure for which there was no HMR equivalent.
- The relief system functioning ranges in these packagings have a higher upper bound and no minimum burst pressure other than those prescribed for a DOT 2P.

I hope this information is helpful. Please contact us if we can be of further assistance.

Sincerely,

A handwritten signature in blue ink, appearing to read "T. Glenn Foster", with a long horizontal flourish extending to the right.

T. Glenn Foster  
Chief, Regulatory Review and Reinvention Branch  
Standards and Rulemaking Division

Edmonson  
§ 178.33c-2  
Aerosol  
18-0006

**Dodd, Alice (PHMSA)**

---

**From:** INFOCNTR (PHMSA)  
**Sent:** Thursday, January 11, 2018 3:40 PM  
**To:** Hazmat Interps  
**Subject:** FW: Clarification of Aerosol DOT 2P1 Buckle/Burst Requirements

Hello All,

This is an interp request from Jaime Suarez. I reached out to him last week to get some clarifying answers and he spoke to someone today in the INFOCNTR. We directed him to 178.33c-2 and HM-233F for his question. He would still like to have written guidance on his mentioned cylinders.

Regards,  
-Breanna

**From:** Suarez, Jaime [mailto:Jaime.Suarez@crowncork.com]  
**Sent:** Friday, January 05, 2018 5:12 PM  
**To:** INFOCNTR (PHMSA) <INFOCNTR.INFOCNTR@dot.gov>  
**Cc:** McFadden, Douglas <douglas.mcfadden@crowncork.com>  
**Subject:** RE: Clarification of Aerosol DOT 2P1 Buckle/Burst Requirements

I am following up on a call I had earlier with the PHMSA-Hazardous Materials information line. DOT 2P1 rating was the consolidation of food stuff SPs (specifically SP 7951), in which specific buckle ranges were included as a requirement. In reviewing the DOT 2P1, there no longer appears to be specific ranges, and DOT 2P1 appears to follow the same buckle/burst requirements as DOT 2P. The information line confirmed that there are no different buckle/burst requirements included in the CFR.

I would like to request a written interpretation letter to confirm the buckle/burst requirements of the DOT 2P1 rating. Please let me know if further information is required to process my request.

Regards,

**Jaime Suarez**

Advisory Engineer | CROWN Technology

Crown Packaging Technology Inc., 11535 S. Central Avenue, 60803-3418, Alsip, IL | United States

T: +1 708 239 5328 | [www.crowncork.com](http://www.crowncork.com) 

**CONFIDENTIALITY NOTICE**

The information contained in this e-mail is intended only for the confidential use of the above named recipient. If you are not the intended recipient or person responsible for delivering it to the intended recipient, you have received this communication in error and must not distribute or copy it. Please accept the sender's apologies, notify the sender immediately by return e-mail and delete this communication. Thank you.