



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

1200 New Jersey Avenue, SE  
Washington, DC 20590

April 27, 2021

Mr. Dave Johnson  
Hasa, Inc.  
23119 Drayton Street  
Saugus, CA 91350

Reference No. 20-0053

This letter is in response to your July 17, 2020, letter and subsequent emails requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to pressure differential testing. In your letter, you state that your company reuses and refills 5, 15, 30, and 55 gallon polyethylene drums—rated for Packing Group (PG) II or III materials—with materials similar to materials the drums previously contained. You ask whether your company’s proposed test procedure, as outlined below, is in compliance with the pressure differential testing requirements specified in paragraph 2 of Appendix B to Part 178 - Alternative Leakproofness Test Methods.

You described your proposed test procedure as follows:

- A test fixture with a single pressure gauge is connected to an opening in the drum. All other openings on the drum are sealed with closures.
- Utilizing a compressed air source and hand valve, the drum under test is pressurized to 3 psig, as indicated on a single pressure gauge measuring the internal pressure of the drum.
- A hand valve is closed, isolating the air source from the drum and pressure gauge measuring the internal pressure of the drum.
- The pressure gauge is monitored for one minute. If no pressure drop is observed on the pressure gauge, the drum is considered to pass the test and is marked accordingly, per § 173.28. If the pressure is not maintained, the drum is considered to fail and is marked out of service and disposed of through a plastic recycler.

It is the opinion of this Office that the proposed test procedure you describe complies with the pressure differential test requirements in paragraph (2) of Appendix B to Part 178. Therefore, the PG II and III polyethylene drums that successfully pass this test may be reused and refilled under § 173.28, provided these packagings comply with all applicable requirements of the HMR. Please be advised that plastic drums may expand under pressure. Therefore, it is recommended

that the drums be pressurized to 20kPa and held at that pressure prior to testing. In addition, as it may be difficult to detect a slow leak, it is also recommended that a low-pressure gauge be used.

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

Sincerely,

A handwritten signature in blue ink that reads "T. Glenn Foster". The signature is fluid and cursive, with a long horizontal flourish extending to the right.

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



Shane Kelley  
Director, Standards and Rulemaking Division  
US DOT/PHMSA (PHH-10)  
1200 New Jersey Avenue, SE East Building, 2<sup>nd</sup> Floor  
Washington, DC 20590

Subject: Letter of Interpretation concerning 49 CFR Part 178, Appendix B – Alternative Leakproofness Test Methods

Dear Mr. Kelley,

Hasa is requesting a letter of interpretation concerning the alternate leakproofness test methods contained in 49 CFR Part 178, Appendix B. Specifically, Hasa is seeking a determination that our test method and procedure for reusing non-bulk plastic packages is compliant with the Pressure differential test regulations contained in paragraph (2) of 49 CFR Part 178, Appendix B. See referenced paragraph below:

*(2) Pressure differential test. The packaging shall be restrained while either pressure or a vacuum is applied internally. The packaging must be pressurized to the pressure required by §178.604(e) of this subchapter for the appropriate packing group. The method of restraint must not affect the results of the test. The test must be conducted for a period of time sufficient to appropriately pressurize or evacuate the interior of the packaging and to determine if there is leakage into or out of the packaging. A packaging passes the pressure differential test if there is no change in measured internal pressure.*

Hasa is refilling plastic poly 5,15,30, and 55 gallon drums with the same type of products in accordance with CFR §173.28. All containers are being packaged in Packing Group II or III UN approved containers.

Hasa is specifically requesting if the following test procedure methodology is compliant with paragraph (2) of 49 CFR Part 178, Appendix B:

- A test fixture with a single pressure gauge is connected to an opening in the drum. All other drum openings are sealed with closures.
- Utilizing a compressed air source and hand valve the drum under test is pressurized to 3 psig as indicated on a single pressure gauge measuring the internal pressure of the drum.
- A hand valve is closed isolating the air source from the drum and pressure gauge measuring the internal pressure of the drum.

- The pressure gauge is monitored for one minute. If no observed pressure drop is observed on the pressure gauge the drum is considered to pass the test and is marked accordingly, per 49 CFR §173.28. If the pressure is not maintained, the drum is considered to fail and is marked out of service and is disposed of through a plastic recycler.

Please advise if the above leakproofness test methodology procedure complies with the current DOT regulatory requirements for conducting the pressure differential test under 49 CFR Part 178, Appendix B, paragraph (2) for the reuse and refilling of packages under 49 CFR 173.28.

If you need any further information or have any questions, please feel free to contact myself at (925) 432-3866.

Sincerely,

A handwritten signature in black ink, appearing to read "Dave Johnson", with a long horizontal flourish extending to the right.

Dave Johnson  
Hasa Inc.