



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

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

NOV 10 2011

Mr. Robb Boros
Patterson Companies, Inc.
1905 Lakewood Drive
Boone, Iowa 50036

Reference No.: 11-0210

Dear Mr. Boros:

This responds to your letter requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to the capability requirements for aerosol containers specified throughout § 173.306. Specifically, you seek clarification of the following language referenced in § 173.306(a)(5)(ii) with concern to aerosol capability.

“All non-DOT specification and specification DOT 2S containers must be capable of withstanding, without bursting, a pressure of one and one-half times the equilibrium pressure of the contents at 130 °F.”

You ask if the temperature reference in § 173.306(a)(5)(ii) is referring to the equilibrium pressure, or the capability requirement, itself.

The temperature reference in § 173.306(a)(5)(ii) is intended to refer to the equilibrium pressure of the contents. Therefore, as specified in § 173.306(a)(5)(ii), all non-DOT specification and specification DOT 2S containers must be capable of withstanding, without bursting, a pressure of one and one-half times the equilibrium pressure of the contents, whatever this may be. Section 178.33b-7 addresses performance of DOT 2S containers at high temperatures.

I hope this satisfies your inquiry.

Sincerely,

A handwritten signature in cursive script that reads "T. Glenn Foster".

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



PATTERSON
COMPANIES, INC.

September 7, 2011

Office of Hazardous Materials Standards
Pipeline and Hazardous Materials Safety Administration
Attn: PHH-10,
U.S. Department of Transportation
1200 New Jersey Avenue, SE, East Building
Washington, DC 20590-0001

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Saint Paul, Minnesota 55120
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Benedict
\$173,306
Cylinders
11-0210

I am requesting clarification regarding the capability testing of aerosol containers as prescribed in several parts of 173.306. I am familiar with a previous letter requesting clarification regarding capability testing procedures and the DOT response that no testing method is specified for determining capability. This letter seeks clarification of the language used in referring to the capability of the aerosol container at the 1.5x equilibrium pressure.

Albeit, the one and one-half capability is referenced in several parts of 173.306, please refer to 173.306(a)(5)(ii):

"Pressure in the container must not exceed 160 psig at 130 °F. If the pressure in the container is less than 140 psig at 130 °F, a non-DOT specification container may be used. If the pressure in the container exceeds 140 psig at 130 °F but does not exceed 160 psig at 130 °F, the container must conform to specification DOT 2S. All non-DOT specification and specification DOT 2S containers must be capable of withstanding, without bursting, a pressure of one and one-half times the equilibrium pressure of the contents at 130 °F."

This entry is clear until the last sentence that presents an ambiguity regarding the temperature reference as explained in the following interpretations:

Interpretation 1: *All non-DOT specification and specification DOT 2S containers must be capable of withstanding, without bursting, a pressure of one and one-half times the [equilibrium pressure of the contents at 130 °F].*

Interpretation 2: *All non-DOT specification and specification DOT 2S containers must be capable of withstanding, without bursting, a pressure of one and one-half times the [equilibrium pressure of the contents] at 130 °F.*

The first interpretation would simply include the temperature as part of the reference to the equilibrium pressure indicating that temperature is irrelevant when verifying capability, whereas the second provides that temperature is pertinent to the capability of the container to withstanding the one and one-half the equilibrium pressure and that the capability must be considered at the 130F temperature.

It would seem that whenever the HMR is looking for data to substantiate performance, there is mandate for consistency. The properties of the materials used to make containers – whether metal or plastic - change when subjected to different temperatures and it would seem prudent they remain consistent throughout testing when the results reflect the containers ability to perform, whether specified or implied.

I have addressed this with Mr. Mark Toughiry of the DOT. After explaining this issue and my concerns regarding plastic aerosol containers, he agreed that capability testing should be conducted at the same temperature as the equilibrium pressure.

Sincerely,

Robb Boros
Compliance Coordinator
Patterson Companies, Inc.
c/o Patterson Logistics Services, Inc.
1905 Lakewood Drive
Boone, Iowa 50036
515.433.1700

Drakeford, Carolyn (PHMSA)

From: INFOCNTR (PHMSA)
Sent: Wednesday, September 07, 2011 2:48 PM
To: Drakeford, Carolyn (PHMSA)
Subject: FW: Letter requesting interpretation of aerosol container capability temperatures
Attachments: Aerosol Capability Temp Letter.pdf

Hi Carolyn,

We received the following request for a letter of interpretation.

Thanks,
Victoria

Victoria Lehman
Hazmat Information Center (HMIC)
<http://phmsa.dot.gov/hazmat/info-center>
(202) 366-1035

From: robb.boros@pattersoncompanies.com [<mailto:robb.boros@pattersoncompanies.com>]
Sent: Wednesday, September 07, 2011 2:06 PM
To: INFOCNTR (PHMSA)
Subject: Letter requesting interpretation of aerosol container capability temperatures

Please find a letter requesting interpretation regarding aerosol container capability and testing.

Thanks

Robb Boros
Compliance Coordinator
Patterson Companies, Inc.
515.433.1700 (Fax 1701)

What would the world be like if Pandora had used UN Packaging?

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