



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

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

APR 04 2016

David B. Bower, Ph.D.
Product Stewardship Advisor, Americas
Infineum USA L.P.
1900 East Linden Avenue
P.O. Box 735
Linden, NJ 07036

Reference No. 15-0247

Dear Mr. Bower:

This is in response to your December 16, 2015 letter requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to testing. Specifically, you ask if the tests your company performed on high-density polyethylene that are fluorinated at several levels of barrier protection for compatibility with Class 3 (flammable) liquids, comply with the "Procedure for Testing Chemical Compatibility and Rate of Permeation in Plastic Packaging and Receptacles" as prescribed in 49 CFR Part 173, Appendix B of the HMR.

The answer is no. Section 2 of 49 CFR Part 173, Appendix B, prescribes only three test methods for determining compatibility and rate of permeation in plastic packagings and receptacles. Test Method 2 requires 28 days of testing at a temperature no lower than 50 °C (122 °F). Your report states that its tests were conducted at 50 °C for 112 days. While the HMR is clear that the temperature used for this test method can be higher, the length of time permitted for the test must be 28 days. If your company would like to vary from these test methods, it must apply for an approval in conformance with the requirements prescribed in § 173.24(e)(3)(iii). This section states that if alternative procedures or rates of permeation are requested they must yield a level of safety equivalent to or greater than that prescribed in § 173.24(e)(3)(ii), and must be specifically approved by the Associate Administrator. To apply for this approval, you must submit an approval application to the Associate Administrator for Hazardous Materials Safety in conformance with the requirements prescribed in 49 CFR Part 107, Subpart H.

I hope this satisfies your request.

Sincerely,

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

Edmonson
178.603(e)iii)
Drop testing
15-0247

Goodall, Shante CTR (PHMSA)

From: Geller, Shelby CTR (PHMSA)
Sent: Wednesday, December 16, 2015 4:08 PM
To: Hazmat Interps
Subject: FW: Request for interpretation 49 CFR 173 Appendix B

Dear Shante and Alice,

Forwarded is a request for a formal letter of interpretation.

Thanks,
Shelby

From: Bower, David [<mailto:David.Bower@Infineum.com>]
Sent: Wednesday, December 16, 2015 11:54 AM
To: PHMSA HM InfoCenter
Subject: Request for interpretation 49 CFR 173 Appendix B

You have received 1 files.
Use the secure links below to download.

Dear Sir or Madam:

Infineum USA L.P. respectfully requests an interpretation as described in the attached letter. If you have any questions, please contact me.

Thank you in advance and best regards,
David Bower

David B. Bower, Ph.D.
Product Stewardship Advisor, Americas
Product Stewardship and Regulatory Compliance

INFINEUM USA L.P.
1900 East Linden Avenue, P.O. Box 735
Linden, NJ 07036 USA

Phone +1.908.474.2634
Fax +1.908.474.3025
e-mail david.bower@infineum.com

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Available until: **14 December 2020**

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Infineum USA L.P
Product Stewardship and Regulatory Compliance
1900 East Linden Avenue
Linden, NJ 07036-1111

David B. Bower, Ph.D.
Product Stewardship Advisor, Americas
phone +1.908.474.2634
fax +1.908.474.3025
e-mail david.bower@infineum.com



14 December 2015

United States Department of Transportation
PHMSA Office of Hazardous Materials Standards
Attention: PHH-10
East Building
1200 New Jersey Avenue South East
Washington, DC 20590-0001

Dear Sir or Madam:

Infineum USA L.P. respectfully asks the Department for its interpretation on the suitability of materials compatibility tests we have conducted.

49 CFR 173, Appendix B specifies the "Procedure for Testing Chemical Compatibility and Rate of Permeation in Plastic Packaging and Receptacles" used to transport liquid hazardous materials. Infineum has tested high-density polyethylene (HDPE) fluorinated at several levels of barrier protection for compatibility with Class 3 flammable liquids. Solvent permeation and drop tests were conducted on small containers made of the same resin, additives and wall-thickness, by the same process as the full-size 330 gallon tote containers we plan to use as permitted under Paragraph 4. Strength & hardness were tested using coupons made of the same materials as the small containers. However, studies were conducted by ageing samples at 50 °C for 112 days instead of the 28 days as specified in Paragraph 2(b). The test complied with all other requirements of Appendix B, including the number of containers, measurement of permeation rate and tensile strength/hardness, and drop testing according to 49 CFR 178.603(e)(iii) for Packing Group III materials.

All test containers made of untreated HDPE as well as all fluorinated samples passed the drop test. Solvent permeation meeting DOT requirements were achieved at the AL (automotive level) of fluorination barrier treatment. A report from the test laboratory is available if needed.

Infineum contacted the PHMSA call center and was informed verbally that these 112-day test data would be accepted by the Department. We would appreciate it if you could review the information provided and confirm this opinion in writing. If you have any questions or need more information, please contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "David B. Bower", with a horizontal line extending to the right.

David B. Bower, Ph.D.
Product Stewardship Advisor, Americas