



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue, SE
Washington, DC 20590

October 28, 2019

Joshua Galvarino
NAFTA Dangerous Goods Coordinator Lead
Transportation Compliance
Mercedes-Benz U.S. International, Inc.
P.O. Box 100
Tuscaloosa, AL 35403

Reference No. 19-0080

Dear Mr. Galvarino:

This letter is in response to your June 13, 2019, email requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to lithium ion batteries transported by ground within the United States. Specifically, you describe and provide photographs depicting a large lithium ion battery assembly that weighs over 12 kg and is enclosed in a strong outer casing with some hoses protruding. You also describe and provide photographs depicting a packaging concept in which the battery is bolted into a wooden crate (one per crate) to prevent movement during transportation, and the wooden crate fully encloses the battery when assembled.

We have paraphrased and answered your questions as follows:

- Q1. You ask whether the battery assembly configuration pictured and described in your letter satisfies the “strong outer casing” requirement as specified in § 173.185(b)(5).
- A1. The answer is yes. Based on the photographs and information you provided, the battery assembly is fully enclosed in a metal casing. This appears to meet the requirements of a strong, impact-resistant outer casing as specified in § 173.185(b)(5).
- Q2. You ask whether lithium ion batteries that meet the requirements of § 173.185(b)(5) are also subject to the inner packaging requirements specified in § 173.185(b)(3)(i).
- A2. The answer is no. The inner packaging requirements specified in § 173.185(b)(3)(i) apply to those batteries that do not meet the requirements of § 173.185(b)(5).

- Q3. You ask whether the use of United Nations (UN) specification packaging without inner packagings is authorized when packaging lithium ion batteries in accordance with § 173.185(b)(5).
- A3. The answer is yes. While this section allows for the use of non-UN specification packaging for larger lithium batteries, they are still authorized as strong outer packagings.
- Q4. You ask whether the packaging concept you have described satisfies the requirements of § 173.185(b)(5).
- A4. The answer is yes. Lithium ion batteries that weigh 12 kg (26.5 pounds) or more and have a strong, impact-resistant outer casing and assemblies of such batteries, may be packed in protective enclosures (for example, in fully enclosed or wooden slatted crates), instead of packages meeting the UN performance packaging requirements in § 173.185(b)(3)(ii) and (iii). Batteries or battery assemblies must be secured to prevent inadvertent movement, and the terminals may not support the weight of other superimposed elements.

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

Sincerely,

A handwritten signature in black ink, appearing to read "T. Glenn Foster". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

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

Larson
19-0080

January, Ikeya CTR (PHMSA)

From: INFOCNTR (PHMSA)
Sent: Thursday, June 13, 2019 6:02 PM
To: Hazmat Interps
Subject: FW: Request for Official Interpretation of Title 49 CFR
Attachments: Interpretation Request Photos.pdf

Hello Alice and Ikeya,

Please see the email below and the attached document for a letter of interpretation request.

Sincerely,

Lynsie, HMIC

From: joshua.galvarino@daimler.com [mailto:joshua.galvarino@daimler.com]
Sent: Thursday, June 13, 2019 12:02 PM
To: INFOCNTR (PHMSA) <INFOCNTR.INFOCNTR@dot.gov>
Subject: Request for Official Interpretation of Title 49 CFR

Hello,

I am contacting you to obtain clarification of packaging requirements for shipping a large format lithium ion battery by ground in the US. Our battery assembly weighs over 12kg and has a strong outer casing which fully encloses all cells. The battery assembly has multiple hoses protruding from the assembly. Pictures of the battery are attached to this request. Does this battery assembly configuration satisfy the "strong outer casing" requirement mentioned in section §173.185(b)(5)?

Are lithium ion batteries which meet the requirements of section §173.185(b)(5), subject to the inner packaging requirements specified in section §173.185(b)(3)(i)?

If the requirements of section §173.185(b)(5) are satisfied, is the use an approved UN specification packaging, without inner packaging, acceptable?

Thank you for your time and guidance.

Best regards,

Josh Galvarino
NAFTA Dangerous Goods Coordinator Lead
Transportation Compliance

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