



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

1200 New Jersey Avenue, SE  
Washington, DC 20590

May 10, 2024

Mr. Justin Sharkey  
Director of Safety  
Dayton Freight Lines, Inc.  
P.O. Box 340  
Vandalia, OH 45377-0340

Reference No. 23-0052

Dear Mr. Sharkey:

This letter is in response to your May 18, 2023, letter and conversations with my staff requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to the shipment of batteries. In your letter, you reference Letter of Interpretation (LOI) 16-0081,<sup>1</sup> in which PHMSA states that an electric storage battery exceeding 400 kg (882 lbs.) and secured to a pallet is considered a bulk package under § 173.159(d)(1).

We have paraphrased and answered your questions as follows:

- Q1. You ask whether a battery secured to a pallet and weighing more than 400 kg (882 lbs.)—with a liquid content of less than 450 L—would meet the definition of a bulk packaging when shipped as “UN2794, Batteries, wet, filled with acid, *electric storage*, 8.”
- A1. In accordance with § 171.8, for solids, a bulk packaging is a packaging with a maximum net mass greater than 400 kg (882 lbs.). It is the opinion of this Office that the weight of the battery determines whether a package meeting the requirements of § 173.159(d)(1) is considered bulk or non-bulk. Therefore, an electric storage battery exceeding 400 kg secured to a pallet is a bulk package.
- Q2. You ask whether a lithium ion battery shipped as “UN3480, Lithium ion batteries, 9” weighing more than 400 kg (882 lbs.) and secured to a pallet would meet the definition of a bulk packaging.

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<sup>1</sup> <https://www7.phmsa.dot.gov/regulations/title49/interp/16-0081>

- A2. It is the opinion of this Office that the weight of the lithium ion battery, without the weight of the pallet, determines whether the lithium ion battery meets the definition of a bulk package. Therefore, a lithium ion battery that has a net mass greater than 400 kg would be considered a bulk package.
- Q3. You state that you typically secure batteries to a pallet with banding, shrink wrap, or bracing screwed to a pallet. You ask whether there is a specific way batteries must be secured to the pallet to meet the requirements specified in § 173.159(d)(1).
- A3. In accordance with § 173.159(d)(1), the electric storage batteries must be firmly secured to skids or pallets capable of withstanding the shocks normally incident to transportation. Provided the load secured with banding, shrink wrap, or bracing described in your letter is capable of handling shocks normally incident to transportation, the electric batteries firmly secured to skids or pallets would be in conformance with § 173.159(d)(1).
- Q4. You ask whether an electric storage battery described in LOI 16-0081 would need to be marked as a bulk or non-bulk package.
- A4. Please see answer A1. It is the opinion of this Office that the weight of the battery determines whether a package meeting the requirements of § 173.159(d)(1) is considered bulk or non-bulk. Therefore, an electric storage battery exceeding 400 kg secured to a pallet is a bulk package and is required to be marked with the United Nations (UN) identification number in accordance with § 172.331.

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

Sincerely,



Steven Andrews  
Acting Chief, Regulatory Review and Reinvention Branch  
Standards and Rulemaking Division

**From:** [INFOCNTR \(PHMSA\)](#)  
**To:** [Dodd, Alice \(PHMSA\)](#)  
**Cc:** [Hazmat Interps](#)  
**Subject:** FW: PHMSA Request for Interpretation  
**Date:** Monday, June 5, 2023 4:42:49 PM  
**Attachments:** [PHMSA Interpretation Request.pdf](#)

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Hello Alice,

Please see the attached interpretation request.

Let us know if you need anything else.

Regards,

-Breanna

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**From:** Cameron Streutker <cstreutker@daytonfreight.com>  
**Sent:** Thursday, May 18, 2023 4:11 PM  
**To:** INFOCNTR (PHMSA) <INFOCNTR.INFOCNTR@dot.gov>  
**Subject:** PHMSA Request for Interpretation

**CAUTION:** This email originated from outside of the Department of Transportation (DOT). Do not click on links or open attachments unless you recognize the sender and know the content is safe.

Dear PHMSA,

Attached is a request for a formal interpretation of the hazardous materials regulations.

Thank you.

Cameron Streutker, CHMM  
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Delivering Value Today. Driving The Standard For Tomorrow.



May 18, 2023

U.S. Department of Transportation  
Standards and Rulemaking Division  
U.S. DOT/PHMSA (PHH-10)  
East Building  
1200 New Jersey Ave., SE  
Washington, DC 20590

Dear Sir/Madam:

I have several questions regarding interpretation number 16-0081.

1. If a battery secured to a pallet weighing more than 400kg (882 lbs.) is known to contain less than 450 L (119 gals) would it still meet the definition of a bulk pack when shipped as UN2794, Batteries, wet, filled with acid?
2. Would a large lithium-ion battery weighing more than 400kg (882 lbs.) secured to a pallet and shipped as UN3480, Lithium ion batteries also be considered a bulk package?
3. The batteries we transport are commonly secured to a pallet with banding, shrink/stretch wrap, or bracing screwed in to the pallet. Is there a specific manner that the battery must be secured to a pallet to meet the requirements in 173.159 (d)(1)?
4. Would a battery secured to a pallet that is considered a bulk package based on 16-0081 be subject to the same labeling requirements as other bulk packaging such as an IBC or because the pallet is an overpack would it require labeling and marking consistent with non-bulk packaging?

Sincerely,

A handwritten signature in black ink that reads "Cameron Streutker".

Cameron Streutker, CHMM

Environmental & Chemical Safety Specialist