



U.S. Department  
of Transportation

**Pipeline and Hazardous  
Materials Safety  
Administration**

1200 New Jersey Avenue, SE  
Washington, DC 20590

September 15, 2020

Dennis Raymund V. Franco  
Manager DG Compliance  
DHL Global Forwarding  
22879 Glenn Drive, Suite 100  
Sterling, VA 20164

Reference No. 20-0058

Dear Mr. Franco:

This letter is in response to your August 5, 2020, email and subsequent phone conversation requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to the requirements for transporting a bicycle powered by a lithium ion battery (an “e-bike”). Specifically, you ask several questions relating to the proper classification and modes of transportation authorized for the e-bike.

- Q1. You ask whether an e-bike with a 418 Watt-hour (Wh) or 504 Wh lithium ion battery installed can be transported by aircraft or vessel.
- A1. The answer is yes. An e-bike powered by a lithium ion battery, transported with the battery installed, is described and classified as “UN3171, Battery-powered vehicle, 9” in accordance with § 172.102(c)(1), Special Provision 134. There is no Wh limit for a lithium ion battery installed in and powering a vehicle.
- Q2. You ask whether an e-bike with a 418 Wh or 504 Wh lithium ion battery installed and described by the shipper as “UN3481, Lithium battery contained in equipment,” would be authorized for transport by aircraft or vessel.
- A2. See answer A1. The proper description for an e-bike transported with a lithium ion battery installed is “UN3171, Battery-powered vehicle.”
- Q3. You ask whether all lithium ion batteries over 300 Wh are forbidden from transportation by aircraft and vessel.
- A3. The answer is no. However, lithium ion batteries with a Wh rating over 300 Wh are ineligible for the small cell and battery exception in § 173.185(c). This does not prevent

lithium ion batteries over 300 Wh from being transported as fully regulated Class 9 hazardous materials, subject to all applicable HMR requirements. Additionally, as discussed above, there is no Wh limit for lithium ion batteries installed in vehicles.

- Q4. You ask whether there is a weight limit for overpacks containing multiple packages of small lithium batteries when transported by highway, rail or vessel. Each package of lithium batteries is prepared in accordance with the exception found in § 173.185(c).
- A4. The answer is no. There is no weight limit for an overpack, or limit on the number of packages of lithium batteries allowed to be overpacked together for transportation by highway, rail, or vessel. This applies to both lithium batteries offered in accordance with the exception for smaller cells and batteries in § 173.185(c), and fully regulated lithium batteries.

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

Sincerely,



Dirk Der Kinderen  
Chief, Standards Development Branch  
Standards and Rulemaking Division

**From:** [Foster, Glenn \(PHMSA\)](#)  
**To:** [Dennis Raymund \(DHL US\)](#); [Pfund, Duane \(PHMSA\)](#); [McLaughlin, Janet <AWA>](#); [Vincent.Babich@dot.gov](#)  
**Cc:** [Dodd, Alice \(PHMSA\)](#)  
**Subject:** RE: Request for interpretation on US DOT 49 CFR §173.185 Lithium cells and batteries (c) (1) (iv)  
**Date:** Wednesday, August 5, 2020 7:37:10 AM

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Good morning, Mr. Raymund.

Thank you for your inquiry. We will have it checked in as a request for a letter of interpretation and assigned to a Transportation Specialist for a response.

Best regards,  
Glenn Foster

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**From:** Dennis Raymund (DHL US) [mailto:dennis.franco@dhl.com]  
**Sent:** Wednesday, August 5, 2020 7:00 AM  
**To:** Pfund, Duane (PHMSA) <Duane.Pfund@dot.gov>; McLaughlin, Janet <AWA> <janet.mclaughlin@faa.gov>; Foster, Glenn (PHMSA) <Glenn.Foster@dot.gov>; Vincent.Babich@dot.gov  
**Subject:** Request for interpretation on US DOT 49 CFR §173.185 Lithium cells and batteries (c) (1) (iv)

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Good morning All,

“As quote “(iv) For transportation by highway or rail only, the lithium content of the cell and battery may be increased to 5 g for a lithium metal cell or 25 g for a lithium metal battery and 60 Wh for a lithium ion cell or 300 Wh for a lithium ion battery, provided the outer package is marked: **“LITHIUM BATTERIES—FORBIDDEN FOR TRANSPORT ABOARD AIRCRAFT AND VESSEL.”**”

Is my understanding correct if for example an e-bike that is designed to carry by one or more person:

- I am transporting UN3171 battery Powered Class 9. If the lithium ion battery has a watt rating of 418 and 504WH on each e-bike, are the battery **FORBIDDEN** for transport by Vessel or Air and is considered a non-compliance issue?
- What if the e-bike is classified as UN3481 Lithium Ion Battery contained in equipment Class 9? If the lithium ion battery has a watt rating of 418 and 504WH on each e-bike, are they also **FORBIDDEN** for transport by Vessel or Air?
- Does these mean any Lithium Ion battery above 300 Wh or more is **FORBIDDEN** for transport by Vessel or Air and can transported only by road or rail?

Please advise.

Thanks & best regards,

**Dennis Raymund V. Franco**

Manager DG Compliance

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