



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

1200 New Jersey Avenue, SE
Washington, DC 20590

January 30, 2024

Mr. Rick Riggle
Chief Operating Officer
L-H Battery Company, Inc.
8500 Bluegrass Blvd. NW
Jeffersonville, OH 43128

Reference No. 23-0045

Dear Mr. Riggle:

This letter is in response to your April 17, 2023, letter requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to lithium ion batteries transported by highway. In your letter, you describe a lithium ion battery module that weighs more than 12 kg with an aluminum casing. As depicted in the photographs you provided, the aluminum casing has a series of large ventilation slots on the top for heat dissipation, and a layer of poly carbonate that separates the cells from the casing and protects the cells from direct exposure. You ask whether the lithium ion battery module configuration with the large ventilation slots satisfies the “strong-impact-resistant outer casing” requirement as specified in § 173.185(b)(5).

Provided that (1) the aluminum casing with large ventilation slots—as depicted in your photographs—is strong and impact-resistant, (2) the lithium ion batteries are secured to prevent inadvertent shifting, (3) the terminals do not support the weight of other superimposed elements, and (4) the lithium ion battery module configuration is further packaged in strong outer packagings, protective enclosures, or on pallets or other handling devices, it is the opinion of this Office that the specific packaging configuration you describe and for which you provided photographs is acceptable for highway transportation in accordance with § 173.185(b)(5).

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

Sincerely,

A handwritten signature in black ink that reads "T. Glenn Foster".

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

From: [INFOCNTR \(PHMSA\)](#)
To: [Dodd, Alice \(PHMSA\)](#)
Subject: FW: Request for Interpretation from L-H Battery Company, Inc.
Date: Thursday, April 27, 2023 12:33:51 PM
Attachments: [Interpretation Letter 4.17.2023.docx.pdf](#)
[Appdx A final.pdf](#)
[Appdx B.pdf](#)

Hi Alice,

Please see the attached LOI request.

Let me know if you need anything else.

Regards,

-Breanna

From: Atriano, Vincent <vincent.atriano@squirepb.com>
Sent: Tuesday, April 18, 2023 7:16 PM
To: INFOCNTR (PHMSA) <INFOCNTR.INFOCNTR@dot.gov>
Subject: Request for Interpretation from L-H Battery Company, Inc.

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CONFIDENTIAL BUSINESS INFORMATION UNDER 49 CFR 105.30

Dear Sir or Madam:

Please find attached a Request for Letter of Interpretation from L-H Battery Company, Inc. addressed to Mr. Shane Kelley.

Please note that only Appdx. A constitutes confidential business information under 49 CFR 105.30. Thank you.



Vincent Atriano
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April 17, 2023

Mr. Shane Kelley
Director, Standards and Rulemaking Division
U.S. DOT/PHMSA (PHH-10)
1200 New Jersey Avenue, SE East Building, 2nd Floor
Washington, DC 20590
infocntr@dot.gov

Re: Request for Letter of Interpretation under 40 C.F.R. § 173.185(b)(5)

Dear Mr. Kelley:

L-H Battery Company, Inc. has developed a module for new rechargeable lithium ion vehicle batteries. The batteries will be used to power new electric vehicles.

The module is shown on the enclosed diagrams. See Appendix A.¹ The modules will hold 24 individual lithium ion cells. The modules have passed the tests specified in Section 38.3 of the UN Manual of Tests and Criteria (namely, T.1 Altitude; T.2 Thermal; T.3 Vibration; T.4 Shock; T.5 External Short Circuit; T.6 Impact/Crush; T.8 Forced Discharge.) See Appendix B. Thus, they are eligible to be offered in transportation. 49 C.F.R. § 173.185(a)(1).

The dimensions of each battery module are 590(L) x 221(W) x 108(H) mm. The metal casing itself is made of sturdy aluminum, and weighs 31 kg. The aluminum is 2 mm in thickness. As you can see from Appendix A, the casing will enclose the cells on all sides. However, the casing contains a series (18) of large slots at the top for heat dissipation. Underneath the slotted aluminum casing is a layer of poly carbonate that separates the cells from the aluminum casing and prevents direct cell exposure.

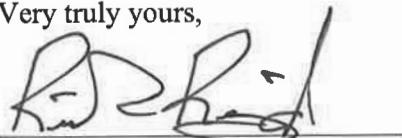
We believe that these battery modules will meet the special packaging authorization of 49 C.F.R. § 173.185(b)(5). They constitute “lithium batteries that weigh 12 kg (26.5 pounds) or more and have *a strong, impact-resistant outer casing.*” The regulation does not specify that such casings have no slotted openings, or that such casings “fully enclose” the cells. Consequently, these batteries “may be packed in strong outer packagings; in protective enclosures (for example, in fully enclosed or wooden slatted crates); or on pallets or other handling devices, instead of packages meeting the UN performance packaging requirements in paragraphs (b)(3)(ii) and (iii) of this section.” See 49 C.F.R. § 173.185(b)(5).

Would you please confirm that our reading of 49 C.F.R. § 173.185(b)(5) is correct?

¹ Please note that we are requesting confidential treatment of Appendix A under 49 C.F.R. § 105.30. Appendix A constitutes a trade secret, and its disclosure could cause competitive harm to L-H Battery Company, Inc. Disclosure of these materials would reveal the proprietary design specifications of the battery modules to competitors, and allow them to reverse engineer competing battery modules, resulting in economic harm to L-H Battery Company, Inc.

Should you need any additional information, please let us know. Thank you for your attention to this request.

Very truly yours,

A handwritten signature in black ink, appearing to read "Rick Riggle", written over a horizontal line.

Rick Riggle, COO
L-H Battery Company, Inc.
8500 Bluegrass Blvd. NW
Jeffersonville, OH 43128

Enclosures

vincent.atriano@squirepb.com | squirepattonboggs.com

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Over 40 Offices across 4 Continents

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