



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

1200 New Jersey Avenue, SE
Washington, DC 20590

December 13, 2022

Ms. Kristie Absher
Environmental Resource Center
101 Center Pointe Drive
Cary, NC 27513

Reference No. 22-0110

Dear Ms. Absher:

This letter is in response to your October 21, 2022, letter requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to an uninterruptible power supply (UPS) and an extended battery module (EBM) that both contain lithium ion batteries. Specifically, you state that the UPS and EBM are back-up power devices that provide power to other equipment, although the EBM can only provide power to other equipment through a connected UPS. Therefore, you believe that both the UPS and EBM devices are best described and classified as “UN3480, Lithium ion batteries *including lithium ion polymer batteries, 9,*” and ask questions regarding the correct description, quantity limitations, and shipping paper requirements for cargo aircraft only transportation.

We have paraphrased and answered your questions as follows:

- Q1. You ask whether this Office agrees with the chosen description of “UN3480” for both the UPS and EBM devices.
- A1. The answer is yes. In a previously published letter of interpretation—Reference No. 21-0080—PHMSA states that a lithium ion battery-powered UPS, the purpose of which is to provide power to separate equipment, is considered a battery. Based on the information you provided, both the UPS and EBM devices would best be described as “UN3480” for the purposes of hazardous materials transportation.
- Q2. You ask whether the quantity limitation of 35 kg for cargo aircraft only is applicable to the weight of the UPS and EBM devices as a whole or is it applicable to the net weight of the lithium ion battery within each device (e.g., the UPS or EBM).
- A2. Although the UPS or EBM devices are best described as “UN3480” for purposes of shipping, the quantity limitation of 35 kg would apply to the weight of the lithium ion

battery contained in the devices. The maximum quantity of hazardous material in a package transported aboard a cargo-only aircraft may not exceed that quantity prescribed for the material in Column 9B of the § 172.101 Hazardous Materials Table. In accordance with § 172.101(j)(2), for Columns 9A and 9B, the quantity limitation per package is “net” except where otherwise specified. Please note: special provision A54 assigned to “UN3480” allows for a lithium battery to exceed the 35 kg quantity limitation when approved by the Associate Administrator.

- Q3. You ask whether you should declare on a shipping paper the weight of the UPS or EBM devices or the net weight of the lithium ion battery within each device. You also ask whether you are prohibited from entering both quantities on a shipping paper.
- A3. Again, although the UPS or EBM device is best described as “UN3480” for purposes of shipping, the weight of the lithium ion battery must be declared on a shipping paper. Additionally, you would not be prohibited from entering both the weight of the lithium ion battery and the weight of the UPS or EBM device on a shipping paper; however, it should be clearly denoted to avoid confusion during acceptance by the carrier and to avoid frustration when shipping these devices.

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: [INFOCNTR \(PHMSA\)](#)
To: [Hazmat Interps](#)
Subject: FW: Request for Interpretation - UPS and EBM devices with lithium ion batteries
Date: Friday, October 21, 2022 2:56:40 PM
Attachments: [EBMDOTLetterrevised.pdf](#)

See attached request for interpretation.

Thanks,
Jonathon, HMIC

From: Kristie Absher <kabsher@ercweb.com>
Sent: Friday, October 21, 2022 1:52 PM
To: INFOCNTR (PHMSA) <INFOCNTR.INFOCNTR@dot.gov>
Subject: Request for Interpretation - UPS and EBM devices with lithium ion batteries

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 DOT representative,

Attached is a request for a letter of interpretation with several questions on UPS and EBM devices that contain lithium ion batteries.

Thank you in advance for your assistance.

Regards,
Kristie Absher
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101 Center Pointe Dr.
Cary, NC 27513
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<http://www.ercweb.com>



October 21, 2022

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

Dear Mr. Kelley:

We have questions about shipping uninterruptable power supplies (UPS) and extended battery modules (EBM) by air. UPSs and EBMs are back-up power devices that contain lithium ion batteries. Their purpose is to power other equipment though an EBM can only power other equipment through a connected UPS.

Because they are used to power other equipment, we think the UPS and EBM devices are classified as UN3480, Lithium ion batteries, Class 9, rather than UN 3481, Lithium ion batteries contained in equipment, Class 9.

Do you agree with the UN3480 classification for both UPS and EBM devices?

For UN3480 via Cargo Aircraft Only, the maximum net quantity per package is 35 kg.

Is the 35 kg quantity limit applicable to the weight of the UPS or EBM as a whole or to the net weight of lithium ion batteries within the UPS or EBM devices?

On shipping papers, do we declare the weight of the UPS or EBM as a whole or the net weight of the lithium ion batteries within the UPS or EBM? Are we prohibited from entering both quantities?

We appreciate your help. Please let us know if you need additional information to respond to our questions.

Sincerely,

Kristie Absher
Senior Consultant