



U.S. Department  
of Transportation

Pipeline and Hazardous  
Materials Safety  
Administration

1200 New Jersey Avenue, SE  
Washington, D.C. 20590

JUN 23 2016

Mr. Bob McClelland  
Air Dangerous Goods Manager  
UPS Airlines  
55 Glenlake Parkway, NE  
Atlanta, GA 30328-3474

Ref. No.: 16-0018

Dear Mr. McClelland

This responds to your email dated January 21, 2016, requesting clarification of the applicability of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) to power banks or supplemental power units containing lithium ion batteries. Specifically you ask whether for the purposes of the HMR such articles are considered "UN3480, Lithium ion batteries" or "UN3481, Lithium ion batteries contained in equipment."

The HMR define *Lithium ion cell or battery* as a rechargeable electrochemical cell or battery in which the positive and negative electrodes are both lithium compounds constructed with no metallic lithium in either electrode (see § 171.8). The HMR further define *equipment* as the device or apparatus for which the lithium cells or batteries will provide electrical power for its operation (see § 173.185).

Based on these criteria, power banks or supplemental power units containing lithium ion batteries are best described as "UN3480, Lithium ion batteries." The battery housed inside a power bank does not power the power bank in the same manner as a battery powers an electric wheelchair or a laptop computer. Rather, a battery in a power pack is used to supply electric power to separate equipment. Thus, for purposes of the HMR, a power bank is a battery and must be transported using a proper shipping name that most appropriately describes the battery type housed in the power bank.

I hope this answers your inquiry. If you need additional assistance, please contact the Standards and Rulemaking Division at (202) 366-8553.

Sincerely,

Duane A. Pfund  
International Standards Coordinator  
Standards and Rulemaking Division

**Dodd, Alice (PHMSA)**

Leary  
§ 171.80  
Definitions  
16-0018

**From:** Kelley, Shane (PHMSA)  
**Sent:** Thursday, January 21, 2016 6:09 PM  
**To:** Dodd, Alice (PHMSA); Goodall, Shante CTR (PHMSA)  
**Cc:** Leary, Kevin (PHMSA)  
**Subject:** FW: Powerbanks  
**Attachments:** 13-0153 Record.docx

Please see the below from Kevin in relation to the interp request I forwarded earlier today. Thanks

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**From:** Leary, Kevin (PHMSA)  
**Sent:** Thursday, January 21, 2016 6:05:51 PM  
**To:** Kelley, Shane (PHMSA); Pfund, Duane (PHMSA)  
**Subject:** RE: Powerbanks

This letter was previously assigned 13-0153. It was closed, handle by phone by Vince. At that time UPS did not seek a written response. All status information on that letter is located in the file for that letter. A screen shot is attached.

If UPS is seeking a written response and they simply want to use their original letter, that is fine but I suggest simply assigning it a new number and flag the 13-0153 record for background information to be used by the regulatory specialist.

**From:** Kelley, Shane (PHMSA)  
**Sent:** Thursday, January 21, 2016 3:16 PM  
**To:** Pfund, Duane (PHMSA); Leary, Kevin (PHMSA)  
**Subject:** RE: Powerbanks

Update: I spoke with Bob and reiterated what we've said at UN and ICAO based on our HMR definition of equipment. They were content with that but also asked if they could get a written response to their previous letter. I told them I would check whether it had been logged into our interp system and if not submit it for formal routing and response. Do we know if it is already logged in?

**From:** Kelley, Shane (PHMSA)  
**Sent:** Thursday, January 21, 2016 1:39 PM  
**To:** Pfund, Duane (PHMSA); Leary, Kevin (PHMSA)  
**Subject:** FW: Powerbanks

I haven't responded or accepted a call yet.

The IATA guidance states:

"Power Bank (power pack, mobile battery, etc.). No formal definition exists and there continues to be discussion at the United Nations Subcommittee of the correct classification for transport. However, for the purposes of this guidance document and the IATA Dangerous Goods Regulations power banks are to be classified as batteries and must be assigned to UN 3480, lithium ion batteries, or UN 3090, lithium metal batteries, as applicable. For carriage by passengers, power banks are considered as spare batteries and must be in carry-on baggage only and must be individually protected from short-circuit."

Looking for a logic-check on this - I believe for the examples we have seen that the guidance is consistent with the HMR (as well as our views as expressed at UN and ICAO) in that if the battery pack does not provide power to the equipment in which it is contained or packed with is it would be considered a battery and not equipment.

I don't mind reaching out to Bob and if the questions go beyond the clear text of the HMR could suggest they pose their questions formally. I can also let them know about the square bracketed text we adopted at UN that would clarify this issue.

**From:** [rfmcclelland@ups.com](mailto:rfmcclelland@ups.com) [mailto:[rfmcclelland@ups.com](mailto:rfmcclelland@ups.com)]

**Sent:** Thursday, January 21, 2016 1:23 PM

**To:** Kelley, Shane (PHMSA)

**Subject:** Powerbanks

Shane –

I assume you are preparing for the incoming blizzard? We are expecting 4 to 8" tomorrow morning and afternoon (not fun for an airline)!

I have a question about the proper classification of Powerbanks. Would you have a moment to talk to Sam Elkind and me about the issue? IATA has added new language to its guidance document defining Powerbanks as UN3480, Li Ion Batteries (versus UN3481). Would just like to get your thoughts from a US perspective.

Let me know if you have a few minutes to discuss with Sam and me this afternoon.

Thanks,

Bob McClelland  
Air Dangerous Goods Manager  
UPS Airlines  
(502) 359-2950 Office  
(502) 741-5763 Cell  
[rfmcclelland@ups.com](mailto:rfmcclelland@ups.com)

## INTERPRETATION LETTER TRACKING DATABASE

Requester	Samuel S. Elkind	Date Received	7/25/2013
Company	UPS	Tracking Number	13-0153
E-mail		Originating Office	
Phone	(404) 828-6064	Days Open	
Address	55 Glenlake Parkway, NE Atlanta, GA 30328-3474	Avg. to Sign	91
			NEW

Data Dump

SEARCH OPTIONS

All Open

11 12 13

AGING REPORTS

Last 30 Days

31 - 60 Days

61 - 90 Days

> 90 Days

91-120 Days

121-180 Days

Last 30 Days

BRANCH REPORTS

All Open

PHH-11 Report

PHH-12 Report

PHH-13 Report

PHH-20 Report

PHC Report

CLOSED REPORTS

Last 30 Days

URL Link 1

URL Link 2

URL Link 3

URL Link 4

URL Link 5

URL Link 6

Other Data Cited

07/29/2013: Letter received -- VAB

08/13/2013: CLOSE OUT -- Handled by phone... Spoke with Samuel Elkind. He said he was not expecting a letter of interpretation. That is why he directed his original letter to DP. The issue is the definition of equipment as it pertains to lithium batteries contained in equipment. There are devices such as power packs, cell phone cases that provide auxiliary/backup power to the phone, etc. These devices house a lithium battery. May have wiring and electronic components but they do not function themselves. They must be attached to a piece of equipment that it provides power to. Some are considering these as and shipping them as lithium batteries contained in equipment and some are shipping them as lithium batteries. The classification results in differences in shipping allowances under ICAO and the way they are tested. The issue was presented at April 2013 ICAO without resolution.

See UN Manual of Tests and Criteria 38.3.2.2. Note on power packs

See ICAO PI 965 for "equipment" and Glossary of Terms... Lithium Battery

Samuel Elkind wanted to bring the issue to our attention and to let us know that the issue does affect UPS, and would like to see a definition so that they are all shipped the same. While he does not really care what the outcome is, he would like to have a resolution and he believes they are batteries. Offers his support and assistance to any efforts that we make to resolve this issue in the international fora

Work is continuing on this issue -- VAB

55 Glenlake Parkway, NE  
Atlanta, GA 30328-3474

July 23, 2013



Mr. Duane Pfund  
International Standards Coordinator  
Pipeline and Hazardous Materials Safety Administration  
U.S. Department of Transportation – PHH-13  
1200 New Jersey Avenue, SE  
East Building, Second Floor  
Washington, DC 20590

Re: Definition of Power Bank or Supplemental Power Units containing Lithium Batteries

Dear Mr. Pfund:

UPS writes to you in your capacity representing the U.S. at the UN Subcommittee of Experts on the Transport of Dangerous Goods. In its handling of various lithium battery shipments, UPS has encountered several shipments of supplemental power sources for personal electronic devices such as smart phones, shipped under Section II of ICAO Packing Instruction 967. Among the forms of such devices are outer covers for smart phones that are supplied with supplemental power sources, or free-standing units that connect by wire to an electronic device. UPS is aware that classification of such articles was considered in the April 2013 Working Group meeting of the Dangerous Goods Panel, but without a firm conclusion (Enclosure 1), and seeks your involvement through the UN SCOE to promote a clear decision that can be used by industry worldwide.

In reviewing the applicable regulations, UPS believes that while some shippers classify these items as UN3481, Lithium ion batteries contained in equipment, a more appropriate classification may be UN3480, Lithium ion batteries. Because shipment compliance, carrier reporting obligations and perhaps even shipment safety may hinge on the manner in which shippers offer these devices, UPS believes this classification question needs clear resolution. The ICAO DGP Working Group believed the multimodal nature of the classification question meant this matter properly ought to be addressed by the UN SCOE (Enclosure 1, paragraph 3.5.6.3).

Within industry, there are proponents of each classification, dividing along lines similar to those illustrated in the April 2013 DGP Working Group discussion. As the purpose of these devices is to supplement or recharge the battery power of a personal electronic device, some hold

## ENCLOSURE 1

### Extract from Report of the ICAO Dangerous Goods Panel Working Group, April 2013:

3.5.6.1 The working group was asked to clarify what constitutes “equipment” when referring to UN 3091, **Lithium metal batteries contained in equipment** and UN 3481, **Lithium ion batteries contained in equipment**. It was suggested that certain articles containing lithium batteries whose sole purpose was to provide external power source to another piece of electronic equipment should be treated as lithium batteries on their own and classified as UN 3090, **Lithium metal batteries** or UN 3480, **Lithium ion batteries**. New text to clarify this was proposed for inclusion in the packing instructions for lithium batteries contained in equipment and in the passenger provisions to differentiate between spare batteries which must be in carry-on luggage and lithium batteries contained in equipment which could be in checked baggage.

3.5.6.2 A representative of the battery industry disagreed with the proposal. He suggested these articles should be considered equipment containing lithium batteries. To be classified as lithium batteries, the articles would be subject to UN testing but that this was not done. Instead the cell or battery inside the device was submitted for testing and then incorporated into the article. Not everyone agreed with this point of view. The working group was reminded of the paper presented at a previous working group meeting reporting on an incident involving e-bicycle batteries classified as lithium batteries contained in equipment. The presenter of that paper was told the batteries should not have been considered contained in equipment because it was not attached to the bicycle.

3.5.6.3 There was support for the intent of the proposal but it was felt the issue, at least in relation to the packing instructions, was a multi-modal one that should be addressed at the UN. Clearly defining what constituted contained in equipment was complicated and would need to be developed carefully.