



U.S. Department  
of Transportation

**Pipeline and Hazardous  
Materials Safety  
Administration**

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

**NOV 13 2012**

Mr. Joseph E. Olsavsky  
Philips Respironics  
1740 Golden Mile Highway  
Monroeville, PA 15146

Ref. No.: 12-0195

Dear Mr. Olsavsky:

This responds to your September 4, 2012 letter requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to your portable oxygen concentrator (POC) and its lithium ion battery pack. You reference an enclosed letter of interpretation issued by the Pipeline and Hazardous Materials Safety Administration (PHMSA) on December 22, 2011 (Ref. No.: 11-0285) to your company, which states that your SimplyGo POC was not subject to the HMR provided it met the criteria of the interpretation letter. Now, you are investigating an engineering proposal to alter the lithium ion battery pack of your SimplyGo POC device "from 7.92 grams total lithium content (93 watt-hour pack) to 10.8 grams total lithium content (127 watt-hour pack)." Your questions are paraphrased and answered below.

Q1: You ask whether the revised 10.8 grams total lithium content (127 watt-hour) pack would require Class 9 markings, labeling, specification packaging, and shipping papers under the HMR?

A1: The 10.8 grams total lithium content (127 watt-hour) pack would be fully regulated under the HMR as a Class 9 hazardous material when transport is by aircraft or vessel but not when transport is by motor vehicle or rail. A device containing not more than 25 grams total lithium content per battery may be excepted from Class 9 requirements under § 172.102(c)(1) Special provision 189 when transport is by motor vehicle or rail. However, due to the change from 7.92 grams total lithium content to 10.8 grams total lithium content, the device no longer qualifies under the § 172.102(c)(1) Special provision 188 and would be regulated under § 173.185.

Provided in § 173.185(c), lithium cells or batteries contained in equipment may be transported as Class 9 materials if the cells and batteries meet all the requirements of paragraph § 173.185(a), except paragraph (a)(4), and the equipment is packed in a strong outer packaging. The equipment and cells or batteries must be secured within the outer packaging and be packed so as to prevent movement, short circuits, and

accidental operation during transport. Furthermore, the Class 9 markings, labeling, and shipping paper provisions would be required.

Q2: You ask what ramifications (i.e., the revised 10.8 grams total lithium content (127 watt-hour pack)) would this have on airline travel, i.e. SFAR 106?

A2: As you may know, Special Federal Aviation Regulation 106 (SFAR 106) "Rules for Use of Portable Oxygen Concentrator Systems on Board Aircraft" is under the purview of the Federal Aviation Administration (FAA), not PHMSA. However, in order for the device to qualify as a POC device under SFAR 106 it must not contain hazardous materials as determined by PHMSA (See section 2 of 14 CFR Part 121, SFAR 106). As a matter of policy, a lithium battery installed within a POC device must conform to § 172.102(c)(1) Special provision 188 in order to be considered an eligible device under SFAR 106. As indicated in A1 above, a lithium ion battery pack with 10.8 grams total lithium content does not qualify under SP 188 and would invalidate your existing FAA approval under SFAR 106.

I hope this satisfies your inquiry. Please contact us if we can be of further assistance.

Sincerely,

A handwritten signature in black ink, appearing to read "T. Glenn Foster". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

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

Nickels  
3172.102 SP188  
3172.101

**Drakeford, Carolyn (PHMSA)**

**From:** INFOCNTR (PHMSA)  
**Sent:** Tuesday, September 04, 2012 1:22 PM  
**To:** Drakeford, Carolyn (PHMSA)  
**Subject:** RE: Portable Oxygen Concentrator - battery cell/lithium content  
**Attachments:** 11-0285.pdf

Ba Heries  
12-0195

Carolyn,

We received the following request for a formal letter of interpretation.

Thanks,  
Victoria

---

**From:** Olsavsky, Joseph [mailto:joseph.olsavsky@philips.com]  
**Sent:** Tuesday, September 4, 2012 12:22 PM  
**To:** infocntr@dot.gov  
**Cc:** Richardson, Gerry; Whitcher, Douglas  
**Subject:** Portable Oxygen Concentrator - battery cell/lithium content

The purpose of this email is to request a clarification on the Hazardous Materials Regulations (HMR) for the transportation of lithium ion batteries; specifically, we are investigating an engineering proposal to change our current battery pack for our SimplyGo Portable Oxygen Concentrator device:

- **from 7.92 grams total lithium content (93 watt-hour pack) to 10.8 grams total lithium content (127 watt-hour pack).**

Our 7.92 gram battery configuration (used in the SimplyGo device) is currently not subject to the HMR (see attached determination letter).

In reviewing the transportation and labeling requirements specified in Section 173 and the hazardous materials table found in Section 172.101 of the HMR, we would like to determine what shipping regulations and special packaging/markings (if any) are in effect based on lithium weight (for primary cells and batteries) and equivalent lithium content (for lithium ion cells and batteries).

It is my understanding that the following regulations apply:

Primary Cell/Battery Max. Lithium Content	Lithium Ion & Polymer Cell/Battery Max. Lithium Content	Shipping Classification/Testing	Special Packaging/Markings
5.0 grams/25 grams	5.0 grams/25 grams	- Excepted/ T1-T6  - excepted from regulations if the battery passes the UN Manual of tests and Criteria T1-T6 tests.	None (excepted from regulations if the battery passes the UN Manual of tests and Criteria T1-T6 tests)

Based on the information provided above and our understanding of the regulations we would request clarification to the following questions:

1. Would the 10.8 gram/127 watt—hr battery pack require Class 9 markings, label, specification packaging, and shipping papers?
2. What ramifications does this have on airline travel; i.e. SFAR 106 ?

Thank you in advance.

Best Regards,

Joe

*Joseph E. Olsavsky, RAC*  
**Sr. Manager - HRC Regulatory Affairs**  
**Philips Respironics**  
**1740 Golden Mile Highway**  
**Monroeville, PA 15146**  
**Office: 724-387-7562**  
**Fax: 724-387-7490**