



U.S. Department  
of Transportation

**Pipeline and Hazardous  
Materials Safety  
Administration**

1200 New Jersey Avenue, SE  
Washington, DC 20590

May 2, 2019

David Cox  
Senior Regulatory Compliance Specialist  
MSC Industrial Direct  
75 Maxess Road  
Melville, NY. 11747

Reference No. 18-0161

Dear Mr. Cox:

This letter is in response to your December 21, 2018, email requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to lithium batteries. Specifically, you ask if clothing that contains lithium cells or batteries (e.g., heated jackets/vests, promotional flashing LED hats, flashing LED sneakers, etc.) meets the definition of "equipment" in § 173.185. You provide specific information on a heated jacket with removable sleeves for reference.

The answer is yes. Section 173.185 defines "equipment" as the device or apparatus for which the lithium cells or batteries will provide electrical power for its operation. In the examples provided, the lithium cells or batteries provide power to the heating element or LED in the jackets/vests, hats, sneakers, etc. Therefore, the piece of clothing containing the lithium cells or batteries would be considered "equipment" for the purposes of the HMR.

Section 173.185(b)(4) provides the general packaging requirements for lithium batteries contained in equipment. Paragraph (i) states that, when used, the outer packaging must be constructed of suitable material of adequate strength and design in relation to the capacity and intended use of the packaging, unless the lithium cells or batteries are afforded equivalent protection by the equipment in which they are contained. It is the opinion of this Office that the clothing in the examples from your email may not provide equivalent protection for the lithium cells and batteries that they contain and therefore may require rigid outer packaging. Please note that when equipment containing lithium cells or batteries is placed in an outer package, § 173.185(b)(4)(ii) requires the equipment to be secured against movement and packed to prevent accidental operation during transport.

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

Sincerely,

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

Bullenger  
18-0161

**January, Ikeya CTR (PHMSA)**

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**From:** INFOCNTR (PHMSA)  
**Sent:** Friday, December 21, 2018 2:53 PM  
**To:** Hazmat Interps  
**Subject:** FW: Request for Letter of Interpretation  
**Attachments:** Heated Jacket with Lithium ion Batteries.pdf  
  
**Importance:** High

Hello Alice and Ikeya,

Please see the letter of interpretation request below and the attached document. We did not find an existing letter that addressed David's questions.

Thanks,

**Lynsie Patschke**  
Transportation Regulatory Specialist  
Hazardous Materials Information Center (HMIC)

**From:** David Cox [mailto:coxd@mscdirect.com]  
**Sent:** Friday, December 21, 2018 12:29 PM  
**To:** INFOCNTR (PHMSA) <INFOCNTR.INFOCNTR@dot.gov>  
**Subject:** Request for Interpretation - detailed explanation of Equipment, Device or Apparatus  
**Importance:** High

Good Morning,

In 49 CFR 173.185, "*Equipment* means the device or apparatus for which the lithium cells or batteries will provide electrical power for its operation."

Attached is an example of an item (Heated Jacket with Lithium ion battery):

Does Clothing such as Heated Jackets, Heated Vests, Promotional Flashing LED Hats (Lithium metal coin cells), Flashing LED Children's Sneakers (Lithium metal coin cells) meet the definition of "Equipment" or are these considered to be "Accessories" or something else ?

If they are considered to be "Accessories" and NOT "*Equipment*", what is the PHMSA definition of "Accessories" with regard to Lithium Batteries in 49 CFR 173.185 and how do these items get classified and shipped (for example, as UN3090 Lithium metal cells / batteries or UN3480 Lithium ion cells / batteries by themselves) ?

Please provide detailed information and guidance.

Thank you,

David Cox  
Sr. Regulatory Compliance Specialist, CHMM, CDGP  
Tel: 516-812-1218  
Fax: 516-812-1568  
E-mail: [Coxd@mscdirect.com](mailto:Coxd@mscdirect.com)

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Ergodyne, Div of Tenacious Holdings, Inc.  
1021 Bandana Boulevard East Suite 220  
St Paul, MN 55108

Phone: 800-225-8238 or +1(651)642-9889  
www.ergodyne.com

**Coordinates**  
44°58'15.5"N  
93°9'8.9"W  
ALT: 930Ft

## N-Ferno® 6490 Heated Jacket W/ Removable Sleeves



### Item Number - Color - Size

- 41403 - Black - M
- 41407 - Black - 3XL
- 41406 - Black - 2XL
- 41404 - Black - L
- 41405 - Black - XL

Order in Multiples of: 1

Outer Layer / Heated Jacket W/ Removable Sleeves  
Includes the 6490J Heated Jacket W/Removable  
Sleeves (includes adapter extension wire), the 6490B  
Rechargeable 7.4V Lithium Ion Battery, and 6490W  
Battery Wall Charger.

### Features

- 2 heat zones distribute heat to core body regions: front chest and back
- 3 heat settings: high, medium, low
- Preheat mode option for increased warm up time
- Adapter extension wire allows user to heat jacket from alternative power source
- Easy touch controller button to navigate through heat settings and pre-heat option
- Up to 9 hours of continuous heat on low setting, 5 hours on medium setting, and 3 hours on high setting
- Water and wind resistant outer shell
- Soft, warm fleece lining.
- 3 external pockets
- Convenient battery holder pocket inside jacket with zipper closure
- Rechargeable Battery: 7.4V, 5200 MAH Lithium Ion Battery
- Replaceable parts available: 6490B battery, 6490W battery wall charger
- Optional accessory: 6490C cigarette converter allows user to heat jacket without battery
- Removable sleeves zip off for vest option
- Wall Charger, compatible with 7.4V Lithium Ion battery

### Application

- Road Construction
- Heavy Construction
- Building Construction
- Iron/Steel Work
- Oil/Gas Refining
- Drilling/Mining
- Freight/Baggage
- Warehousing/Distribution
- Landscaping/Grounds

For more information, visit <https://www.ergodyne.com/warming/heated-clothing-accessories/n-ferno-6490-heated-jacket-removable-sleeves.html>  
\_dmSetDomain("ergodyne.com");