



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

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

JAN 06 2016

Mr. Norbert W. Makowka
Vice-President Technical
National Association of Fire Equipment Distributors
180 North Wabash, Suite 401
Chicago, IL 60601

Reference No. 15-0118

Dear Mr. Makowka:

This is in response to your June 15, 2015 letter requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to the transportation of carbon dioxide fire extinguishers. Specifically, you ask if the extinguishers may be described as "UN 1044, Fire extinguishers *containing compressed or liquefied gas*, 2.2 (non-flammable gas)." If not, you ask what the correct identification number, proper shipping name, marking and labeling requirements are for these devices.

You state the fire extinguishers are:

- Made of either steel or aluminum and meet the specification requirements for a Department of Transportation (DOT) Specification 3 series seamless cylinder;
- Hand-held units with a 5, 10, 15, or 20 pound capacity, or are wheeled units with a 50 pound capacity;
- Filled with 100 percent "UN 1013, Carbon dioxide, 2.2" to a 90 percent fill density;
- Manufactured and tested in conformance with the following American National Standards Institute, Inc. (ANSI) /Underwriters Laboratories, Inc. (UL), –
 - "Standard for Carbon-Dioxide Fire Extinguishers," ANSI/UL 154, CAN/ULC-S503, 2005, Revised 2010;
 - "Binational Standard for Rating and Fire Testing of Fire Extinguishers," ANSI/UL 711 CAN/ULC-S508; and
- Recognized in the National Fire Protection Association (NFPA) "NFPA 10 Standard for Portable Fire Extinguishers"

Under the HMR, a fire extinguisher must contain 30 percent or less carbon dioxide by volume (see § 173.309(a)). Based on the information you provided, the carbon dioxide in your fire extinguishers exceeds this limit by 70 percent. Therefore, your fire extinguishers must be described as "UN 1013, Carbon dioxide, 2.2," marked as prescribed in § 172.301, and labeled with the NON-FLAMMABLE GAS label prescribed in § 172.415.

I hope this satisfies your request.

Sincerely,

A handwritten signature in cursive script that reads "T. Glenn Foster". The signature is written in black ink and is positioned below the word "Sincerely,".

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



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June 15, 2015

U.S. Department of Transportation
PHMSA Office of Hazardous Materials Standard
Attention: PHH-10
East Building
1200 New Jersey Avenue SE
Washington, D.C. 20590-0001

Edmanson
\$173.309
Fire Extinguishers
15-0118

Regarding: 49 CFR, Section 173.309

To whom it may concern:

What are the correct shipping name, identification number, and labeling requirements for a "carbon dioxide fire extinguisher"? These "extinguishers" utilize a DOT 3 series steel or aluminum specification cylinder and are filled with 100% carbon dioxide to a 90% fill density.

These "carbon dioxide fire extinguishers" are manufactured and tested in accordance with ANSI/UL 154, CAN/ULC-S504, *Standard for Carbon Dioxide Fire Extinguishers*, 2005, Revised 2010; and ANSI/UL 711, CAN/ULC-S508, *Standard for Rating and Fire Testing of Fire Extinguishers*, 2004, Revised 2009. They are available in 5, 10, 15, and 20 pound capacity hand-held units and 50 pound capacity units that are mounted on a wheeled assembly.

These are recognized in the National Fire Protection Association Standard 10, *Standard for Portable Fire Extinguishers*, which is the national consensus standard that has been adopted throughout the United States and Canada. Carbon Dioxide "fire extinguishers" have been recognized in various national regulations for decades as "fire extinguishers".

May these devices be transported, marked and labeled as Fire Extinguisher, UN 1044?

If not, what is the correct transportation, marking and labeling requirements?

Thank you for your consideration of this matter,

Norbert W. Makowka
Vice-President Technical
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