



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

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

DEC 18 2012

Mr. Mark Fazio
Senior Mechanical Engineer
UTC Aerospace Systems
4200 Airport Drive
Wilson, NC 27896

Ref. No.: 12-0213

Dear Mr. Fazio:

This is in response to your September 11, 2012 letter requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) as they pertain to UN1044, fire extinguishers. In your letter you describe two, DOT specification 39 cylinders with a volumetric capacity of 11.7 (cu in) and 19.6 (cu in) and an operating pressure of 1225 psi. It is your understanding that these cylinders should be shipped as UN1044, fire extinguisher.

The HMR do not authorize the use of DOT specification 39 cylinders as UN1044, fire extinguishers. When transported, each cylinder must be described with the name of its compressed gas contents and the outside package must be properly marked and labeled in accordance with Part 172.

The requirements for shipping fire extinguishers are found in § 173.309. Paragraph (a) of this section permits the use of non-specification cylinders charged with a limited quantity of compressed gas to not more than 241 psig. Such fire extinguishers are excepted from labeling, unless shipped by aircraft and the specification packaging requirements when shipped under the conditions described in § 173.309(a)(1) through (a)(3). If the requirements of § 173.309(a) cannot be met, a DOT specification 3A, 3AA, 3E, 3AL, 4B, 4BA, 4B240ET, or 4BW (§§ 178.36, 178.37, 178.42, 178.46, 178.50, 178.51, 178.55, and 178.61) cylinder must be used in accordance with § 173.309(b).

I hope this information is helpful. If you have further questions, please do not hesitate to contact this office.

Sincerely,

Delmer Billings
Senior Regulatory Advisor
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Fire Protection Systems

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Leary
§173.309
§172.102
Fire Extinguishers
12-0213

September 11, 2012

Associate Administrator for Hazardous Material Safety
Pipeline and Hazardous Materials Safety Administration
U.S. Department of Transportation
East Building
1200 New Jersey Avenue, SE
Washington, D.C. 20590-0001

Attention: Special Permits, PHH-31

Subject: Interpretation of 49 CFR 173.309 and 172.102

Dear Sir/Madam:

Kidde Aerospace & Defense (KAD), a company of UTC Aerospace Systems – Fire Protection Systems, is requesting interpretation of the 49 CFR 173.309 and 172.102. The interpretation request is related to specification 39 (49 CFR 178.65) pressure vessels, KAD part numbers 474617 and 474618. The design specifications of these cylinders are provided below.

	P/N 474617	P/N 474618
Volume, cu.in.	11.7	19.6
Charge Pressure, psig @ 70F	1225	1225
Identification Number	UN1044	UN1044
Hazardous Materials Description	Fire Extinguisher <i>containing compressed gas</i>	
Actuation Device	Cartridge, power device	

The hazardous material description and proper shipping name per 49 CFR 172.101 is "Fire Extinguisher". As such, the packaging authorizations per columns 8A, 8B and 8C of the hazardous materials table indicate that in addition to the requirement of 49 CFR 173.24 and 49 CFR 178.65, that the requirements of 49 CFR 173.309 also apply.

KAD's interpretation of 49 CFR 173.309 and its sub parts are as follows:

173.309(a) – Applies: the subject part numbers are not exempt from labeling as the extinguishers are charged to 1200 psig.

173.309(a)(1) – Applies: Agent is nonflammable, nonpoisonous and noncorrosive.

173.309(a)(2) – Applies: The extinguishers are shipped as an inner packaging.

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Mark Fazzio
Senior Mechanical Engineer, Fire Extinguishing Products

173.309(a)(3)(i, ii, iii, iv) – Does not apply: Requirements are for non-specification cylinders only. The units are designed to spec. 39.

173.309(a)(4)(i, ii, iii) – Does not apply: Only applies to specification 2P & 2Q.

173.309(b) – Does not apply: Identifies additional specifications which are acceptable and is not a fully inclusive list. Other specification and non-specification cylinders are acceptable provided they meet the requirements of 173.309(a).

In addition, KAD's interpretation of special provisions for fire extinguishers listed in the hazardous materials table of 49 CFR 172.101 identifying 49 CFR 172.102 paragraphs 18 and 110 are as follows.

Special provision 18 – Does not apply: Only applicable to fire extinguishers listed in 173.309(b).

Special Provision 110 – Applies: Permits the use of a cartridge, power device of Division 1.4C or 1.4S with quantity of explosives less than 3.2 grams to be included with each fire extinguisher without changing the classification.

Please advise if these are accurate interpretations of 49 CFR 173.309 and 172.201, as well as UN1044 as the appropriate identification number.

Thank you,



Mark Fazzio