



U.S. Department
of Transportation
**Research and
Special Programs
Administration**

400 Seventh Street, S.W.
Washington, D.C. 20590

MAY -5 2000

Mr. Len Seebaluck, P.Eng.
Engineering Manager
Firetrace Systems International, Inc.
102, 118-1st Avenue
Cochrane, Alberta, Canada T0L 0W0

Ref. No. 99-0322

Dear Mr. Seebaluck:

This is in response to your request for information on the requirements applicable to nonspecification cylinders that are used as fire extinguishers under the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). You described the aluminum cylinders as having volumetric capacities ranging from 70 cubic inches [1.15 L or 1,147.3 ml.] to 302 cubic inches [4.95 L], an operating pressure of 150 psi, and a minimum burst pressure of 900 psi. The cylinders will be imported into the United States from Canada.

Your nonspecification fire extinguishers must fully meet the limited quantity requirements contained in § 173.309(a) through (a)(3)(iv). Your cylinders appear to meet the internal volume limitation and the minimum burst pressure requirements prescribed in paragraph (a)(3)(i) and (ii). As stated in paragraph (a)(3)(iii), prior to initial shipment, each cylinder must be tested, without evidence of failure or damage, to at least three times its charged pressure at 21 °C (70 °F). Each fire extinguisher must be marked with the test date and with the words "MEETS DOT REQUIREMENTS".

The extinguishing agent must meet the requirements in Special Provision 18 in § 172.102. Because the cylinders have capacities exceeding 900 ml (55 cubic inches), they may not contain any liquefied compressed gas. A cylinder charged with a non-liquefied gas, at a pressure of 300 psi or less at 21 °C (70 °F), is not required to be fitted with a pressure relief device. See § 173.34(d)(2).

Shipments of the fire extinguishers must meet the shipping papers, packaging markings and, when offered for transportation by aircraft, the hazard warning labels requirements prescribed in Subparts C, D and E of Part 172, respectively. Shipments by air must also meet the per package



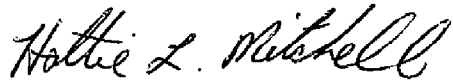
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quantity limitations prescribed in the § 172.101 Hazardous Materials Table for the material and the general requirements in § 173.27. An electronic version of the HMR can be assessed through our internet web site at <http://hazmat.dot.gov>.

I hope this information is helpful.

Sincerely,

A handwritten signature in cursive script that reads "Hattie L. Mitchell".

Hattie L. Mitchell
Chief, Regulatory Review and Reinvention
Office of Hazardous Materials Standards

FIRETRACE®

AUTOMATIC FIRE SUPPRESSION SYSTEMS

Date: 8 December, 1999

To: Mr. Edward Mazullo
Company: Director, Office of Hazardous Material
Department of Transportation

Fax: 202-366-3012

From: Len Seebaluck, P.Eng
Engineering Manager

Subject: D.O.T requirements for Shipping Charged Fire Extinguishing
Cylinders

Pages: 2

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Mr. Mazullo

Firetrace Systems International Inc. is based in Canada and is in the Fire Protection business. Our intent is to ship our system, which contains pressurized cylinders, to the U.S. Being unfamiliar with the regulations regarding shipping of cylinders under the department of transportation, it would be much appreciated if you could provide me with guidance. According to 173.309 CFR, our cylinder is a nonspecification cylinder.

Cylinder and system information

Cylinder Material: Aluminum
Cylinder Volume: Ranges from 70 in³- 302 in³
Operating Pressure: 150 psi
Burst Pressure Min : 900 psi
Cylinder listings: UL/ULC
Extinguishing agents: Dry Chemical (ABC, BC) or FM-200 gas

Questions:

1. What is the D.O.T requirement for shipping this cylinder to and within the U.S?
2. What is D.O.T labeling required? Does it need to be stamped on the cylinder or marked with a permanent ink?
3. Is any test required? If so, what is the procedure?
4. What type of packaging is required?
5. Is there a requirement for a pressure relief valve on this system?
6. What are the requirements if these charged cylinders are transported by air?
7. Are there any other considerations being overlooked?

Firetrace Systems International Inc.

We are hoping to soon begin one-year leak testing of our system with Underwriter's Laboratories, and prior to the start, I would appreciate if we could hear from you.

Should you require any further information, do not hesitate to contact me. Thanking you in advance for you collaboration.

A handwritten signature in black ink, appearing to be "G. Baker", written over a horizontal line.