



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue, SE
Washington, DC 20590

FEB 02 2018

Mr. Steven Baker
Director of Engineering
Safecraft Inc.
557 Clark Avenue
Pittsburg, CA 94565

Reference No. 17-0087

Dear Mr. Baker:

This letter is in response to your August 18, 2017, letter requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to fire suppression systems. Specifically, you ask about fire suppression systems used in racing vehicles consisting of:

- A 104–250 cubic inch cylinder, with a service pressure of 500–1,000 pounds per square inch (psi), respectively, and 1,440–2,500 psi burst pressure, respectively.
- 5–10 pounds of 3M Novec 1230 fire extinguishing fluid.
- Cylinder pressured to 200 psi with dry nitrogen at 70 °F. (Cylinder pressure at 130 °F is approximately 225 psi.)
- A discharge valve fitted with a 500-psi frangible metal pressure relief disc.

We have paraphrased and answered your questions as follows:

- Q1. You ask if “portable” as referenced in § 173.309 applies to handheld-type fire extinguishers only.
- A1. The answer is no. Section 173.309 states, “This section applies to portable fire extinguishers for manual handling and operation, fire extinguishers for installation in aircraft, and large fire extinguishers.” Portable fire extinguishers may include both handheld fire extinguishers as well as fire extinguishers that are mobile in that they can be moved from place to place (such as on wheels). However, the specifications provided in your letter indicate that the cylinders are: 1) fitted with discharge valves and a frangible metal pressure relief disc, and 2) designed for use as fixed fire suppression systems. Therefore, the cylinders would not be applicable to § 173.309. If the cylinders are non-specification cylinders, they must meet the requirements in § 173.309(c). If they do not meet the requirements in § 173.309(c), your company would need to apply for a special permit in accordance with § 107.105 of the HMR.

- Q2. You ask if Department of Transportation specification 39 cylinders are authorized for use under § 173.309.
- A2. The answer is no. Only the specification cylinders listed in § 173.309(a) can be used as fire extinguishers.
- Q3. You ask if fire extinguishers constructed using a non-specification cylinder per § 173.309(c) that do not contain liquefied compressed gas and are charged to 200 psi at 70 °F with dry nitrogen are eligible for shipment as a limited quantity and excepted from shipping papers.
- A3. Provided they meet the requirements of § 173.309(a), (b), and (c), the non-specification cylinders you describe may be eligible for limited quantity provisions under § 173.309(d).

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

Sincerely,

A handwritten signature in blue ink that reads "T. Glenn Foster". The signature is fluid and cursive, with a long horizontal flourish extending to the left.

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

Andrews
\$ 173.309
Cylinders
17-0087

Dodd, Alice (PHMSA)

From: INFOCNTR (PHMSA)
Sent: Monday, August 21, 2017 9:47 AM
To: Hazmat Interps
Subject: FW: Request for Interpretation
Attachments: DOT Request Letter.pdf

Hi Alice,

Please submit this as a letter of interpretation. Mr. Baker spoke with Breanna.

Thanks,
Jodi

From: Steven Baker [mailto:steve@safecraft.com]
Sent: Friday, August 18, 2017 1:06 PM
To: PHMSA HM InfoCenter <PHMSAHMInfoCenter@dot.gov>
Subject: Request for Interpretation

Please feel free to contact me if you have questions and we look forward to receiving your response.

Regards,

Steven Baker
Safecraft Inc.
557 Clark Ave
Pittsburg CA 94565
925-408-9559





U.S. DOT
PHMSA Office of Hazardous Materials Standards
Attn: PHH-10
East Building
1200 New Jersey Avenue, SE.
Washington, DC 20590-0001

August 18, 2017

Safecraft designs and manufactures fire suppression systems for motorsports vehicles. These systems are installed in racing vehicles and typically activated by the driver via a remote pull cable, or electrically activated by a switch. A typical motorsports vehicle system consists of a:

- A) 104 – 250 cubic inch cylinder, with a service pressure of 500-1000 PSI respectively and 1440-2500 PSI burst pressure respectively.
- B) 5-10 pounds of 3M Novec 1230 fire extinguishing fluid.
(Per 3M, it is an unregulated material, non-flammable, non-hazardous, and not a liquefied compressed gas)
- C) Cylinder is pressurized to 200 PSIG with dry nitrogen at 70F.
(Cylinder pressure at 130F is approximately 225 PSIG).
- D) A discharge valve fitted with a 500 PSI frangible metal pressure relief disc.

Our engineering staff is reviewing a customer's specification that outlines a requirement that our system be designed to meet 49 CFR 173.309, along with other requirements.

We would like to request an interpretation or clarification of some paragraphs contained in 173.309 as follows:

- 1) 173.309 states "This section applies to portable fire extinguishers for manual handling and operation, fire extinguishers for installation in aircraft, and large fire extinguishers.

Q1) Does "portable" apply to "handheld" type fire extinguishers only?

PHMSA Office of Hazardous Materials Standards con't
August 18, 2017

- 2) 173.309(a) outlines several specification cylinders that are authorized for use. A previously published DOT interpretations listed online, from several years past, stated that specification 39 cylinders are not authorized for use under 173.309.
- Q2) Are specification 39 cylinders authorized for use under 173.309 as it is currently published?
- 3) 173.309 (6)(d) Limited Quantities:
 - Q3) Are fire extinguishers constructed using a non-specification cylinder per 173.309 (c), that do not contain liquefied compressed gas, and charged to 200 PSI at 70F with dry nitrogen, eligible for shipment as limited quantity and excepted from shipping papers?

We look forward to your comments.

Regards,

Steven Baker

Steven Baker
Director of Engineering