



U.S. Department
of Transportation
**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue, SE
Washington, DC 20590

September 14, 2022

Mr. James V. McManus
Senior Principal Engineer
Entegris, Inc.
7 Commerce Drive
Danbury, CT 06810

Reference No. 22-0027

Dear Mr. McManus:

This letter is in response to your March 17, 2022, letter requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to the responsibilities of an inspector of Department of Transportation (DOT) specification cylinders. Specifically, you seek clarification regarding inspections of DOT-3AA cylinders performed in accordance with § 178.35(c) of the HMR by an Independent Inspection Agency (IIA), and whether an inspector must verify the markings required by § 178.35(f) on 100% of the cylinders listed in the Inspector's report. You state that § 178.35(c) specifies that the inspector shall determine that each cylinder made is in conformance with the applicable specification. You further state that it is your understanding that the marking requirements in § 178.35(f) are part of the specification for DOT-3AA cylinders. Lastly, you state that in your experience as an inspector, you visually verify all marking requirements for 100% of all finished cylinders.

We have paraphrased and answered your questions as follows:

- Q1. You ask whether an IIA's inspector is required to verify that markings comply with § 178.35(f) for each finished DOT-3AA cylinder listed by serial number on the Inspector's report.
- A1. The answer is yes. In accordance with § 178.35(c), it is the duty of the inspector to determine that each cylinder made is in conformance with the applicable specification. Inspections shall conform to Compressed Gas Association (CGA) Pamphlet C-11, Practices for Inspection of Compressed Gas Cylinders at Time of Manufacture. Paragraph 5.2.12 in CGA C-11 states that "the inspector shall verify that the required markings have been applied to finished cylinders and are in accordance with applicable regulations."

Q2. You ask whether the word “verify” means that the inspector must visually inspect each cylinder listed on the inspector's report to ensure the markings comply with § 178.35(f) of the HMR.

A2. The answer is no. CGA C-11 states in Section 1 that “witnessing” implies a physical presence, whereas “verifying” usually involves gaining information without physical presence by examining records or statements of other persons in whom trust has been placed. Further, in paragraph 3.2.10 of CGA C-11, the word “verify” is defined as follows: “to confirm either by examination, evidence, testimony, research, demonstration, or comparison.”

Q3. You ask whether it is the intent of the HMR to ensure that the markings on 100% of the cylinders are verified by the IIA’s inspector.

A3. The answer is yes.

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 Branch
Standards and Rulemaking Division

Larson

From: [INFOCNTR \(PHMSA\)](#)
To: [Hazmat Interps](#)
Subject: FW: Request for Interpretation
Date: Wednesday, April 13, 2022 4:06:34 PM
Attachments: [image001.png](#)
[image002.png](#)
[Entegris Request for Interpretation 49 CFR §178.35 \(c\).pdf](#)

22-0027

Hello Hazmat Interps,

Attached is a request for interpretation.

Thanks,

Jonathon, HMIC

From: Jim McManus <Jim.McManus@entegris.com>
Sent: Friday, March 18, 2022 10:08 AM
To: INFOCNTR (PHMSA) <INFOCNTR.INFOCNTR@dot.gov>
Subject: RE: Request for Interpretation

CAUTION: This email originated from outside of the Department of Transportation (DOT). Do not click on links or open attachments unless you recognize the sender and know the content is safe.

Hello,

I just noted the file I sent to PHMSA yesterday had an incorrect file name.

The content of the file remains the same:

The letter seeks an interpretation of 49 CFR 178.35 (c) not 180.205 (c).

Regards,

Jim

From: Jim McManus
Sent: Thursday, March 17, 2022 4:08 PM
To: infocntr@dot.gov
Subject: Request for Interpretation

Good day,

Pursuant to 49 CFR § 105.20, this letter is being submitted by e-mail to PHMSA to request an interpretation of the Hazard Materials Regulations pertaining to the duties of an inspector who inspects DOT specification cylinders.

Regards,

Jim

Jim McManus

Sr. Principal Engineer

Dangerous Goods Safety Advisor (DGSA)

M 203-482-1606

T 203-207-9307

E jim.mcmanus@entegris.com



entegris.com
PURE ADVANTAGE

7 Commerce Drive
Danbury, CT 06810 USA



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ENTEGRIS PROPRIETARY AND CONFIDENTIAL – INTERNAL

March 17, 2022

Standards and Rulemaking Division
Pipeline and Hazardous Materials Safety Administration, Attn: PHH-10
U.S. Department of Transportation
East Building
1200 New Jersey Avenue, SE
Washington, DC 20590-0001
infocntr@dot.gov

Re: Request for Interpretation

Dear Sir or Madame:

Pursuant to 49 CFR § 105.20, this letter is being submitted by e-mail to PHMSA to request an interpretation of the Hazard Materials Regulations pertaining to the duties of an inspector who inspects DOT specification cylinders.

Background

This request for interpretation involves the requirements for inspections and verifications performed by an Independent Inspection Agency who conducts these duties for DOT-3AA cylinders in accordance with 49 CFR § 178.35 (c).

Specifically, this request for interpretation seeks to clarify if the inspector must verify the markings required by § 178.35 (f) on 100% of the cylinders listed in the Inspector's report.

49 CFR § 178.35 (c) states that the inspector shall determine that **each** cylinder made is in conformance with the applicable specification.

The specification for DOT-3AA cylinders is codified in 49 CFR § 178.37. Interpretation of 49 CFR § 178.37 infers that a DOT-3AA cylinder must conform to both § 178.37 and § 178.35 – General requirements for specification cylinders.

§ 178.35 (f) includes the marking requirements for DOT specification cylinders. The necessary markings include the DOT specification, service pressure, serial number, symbol of manufacturer, inspectors mark and date of test.

It follows then that the marking requirements of § 178.35 (f) are interpreted to be part of the specification for DOT-3AA cylinders.

Additionally, § 178.35 (c)(1) states that for seamless cylinders, inspections shall conform to section 5 of CGA C-11 (IBR, see § 171.7 of this subchapter) except as otherwise specified in the applicable specification.

CGA C-11 section 5 states the following regarding verification of markings for seamless cylinders:

CGA C-11 – 5.1 Duties of certifying inspector

The certifying inspector shall ensure that the following duties are performed in accordance with the individual DOT/TC/UN specification under which the cylinders are being manufactured:

Under bullet 11

- verify required markings,

My experience with inspecting and verifying markings on cylinders is as follows:

1. I visually verify that all required DOT markings are present and in the location specified by § 178.35 (f). I do this by comparing the as marked cylinder vs. the approved stamping layout drawing for the cylinder.
2. I visually verify the markings are stamped on the shoulder, top head, or neck.
3. I verify the markings are stamped plainly, permanently and are legible.
4. Using a suitable measurement device or gage, I verify the markings are the proper size (0.25" or as size permits).
5. I verify any other markings are made in low stress areas other than the side wall and are not of a size and depth that will create harmful stress concentrations. These marks may not conflict with any DOT required markings.
6. I would do this for each finished cylinder; that is 100% inspection.

Questions:

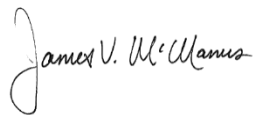
Based on the above background information, Entegris has the following questions:

1. Does the Independent Inspection Agency's inspector have to verify that for **each** finished DOT-3AA cylinder listed by serial number on the Inspector's report, the markings are in compliance with § 178.35 (f)?
2. Does "verify" mean that the inspector has to visually inspect **each cylinder** listed on the Inspector's report to ensure the markings are in compliance? (This question assumes the only method to verify markings would be for a human being to visually inspect the markings).
3. Is the intent of the regulations to ensure that the markings on 100% of the cylinders are verified by the Independent Inspection Agency's inspector?

Entegris greatly appreciates PHMSA's attention to this matter and looks forward to a response that further clarifies our understanding of the hazardous materials regulations.

Should PHMSA require additional details to process this interpretation, please contact me using the information listed below.

Sincerely,



James (Jim) V. McManus

Entegris, Inc.

Sr. Principal Engineer

M 203-482-1606

jim.mcmanus@entegris.com