



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

1200 New Jersey Avenue, SE  
Washington, DC 20590

December 5, 2022

Mr. Mike Stephens  
Manager Distribution Compliance  
Linde Gas & Equipment Inc.  
217 Loren Street  
Washington, IL 61571

Reference No. 22-0035

Dear Mr. Stephens,

This letter is in response to your March 29, 2022, email requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to the transportation requirements for dual-marked Department of Transportation (DOT) 3AA and United Nations International Organization for Standardization (UN ISO) 9809 cylinders that are also pi-marked. Specifically, you state that your company fills and ships dual-marked, pi-marked cylinders, without pressure relief devices (PRDs), and with the valves protected by steel caps, which are secured to the cylinders. You have included a picture of the steel cap assembly that protects the valve in your email.

We have paraphrased and answered your questions as follows:

- Q1. You ask whether pi-marked DOT 3AA/UN ISO 9809 cylinders meet the provisions in § 173.301(f)(5)(iv) in that a PRD is not required on these cylinders for domestic and foreign transportation.
- A1. Section 173.301(f)(5)(iv) states that a PRD is not required on a UN pressure receptacle transported in accordance with paragraph (k) or (l) of § 173.301. The reference to paragraphs (k) and (l) in § 173.301(f)(5) is incorrect. This appears to have been an oversight in a previous rulemaking and will be addressed in a future rulemaking. The provisions in § 173.301(k) and (l) are now found in § 171.23(a)(4) and (5). A PRD is not required on a UN pressure receptacle imported for discharge within a single port area, provided the conditions of § 171.23(a)(4)(i) through (iii) are met, or on a UN pressure receptacle filled with a gas and offered for transportation and transported for export, provided the conditions in § 171.23(a)(5)(i) through (iii) are met. Further,

§ 171.23(a)(6) specifies additional conditions for DOT specification and UN cylinders not equipped with PRDs provided they are offered for transportation and transported for export. These exceptions do not apply to cylinders offered for domestic transportation.

- Q2. You ask whether the use of a steel cap conforming to ISO 11117:2008 meets the requirements of § 173.301b(c)(2).
- A2. The answer is yes. In accordance with § 173.301b(c)(2)(ii), a UN pressure receptacle must have its valves protected from damage that could cause inadvertent release of the contents of the UN pressure receptacle by one of the methods listed in paragraphs (c)(2)(i) through (vi) of that section. One of the permitted methods listed in paragraph (c)(2)(ii) entails equipping the UN pressure receptacle with a valve cap conforming to the requirements in ISO 11117:2008(E) and Technical Corrigendum 1.
- Q3. You ask whether the use of a steel cap referenced in question Q2 is considered a “metal attachment,” as stated in § 173.301(k).
- A3. The answer is yes. As stated in § 173.301(k), metal attachments to cylinders must have rounded or chamfered corners, or be otherwise protected, to prevent the likelihood of causing puncture or damage to other hazardous materials packages. This requirement applies to anything temporarily or permanently attached to the cylinder, such as metal skids. The steel cap shown in your picture may meet this requirement.

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:** [Dodd, Alice \(PHMSA\)](#)  
**Cc:** [Hazmat Interps](#)  
**Subject:** FW: Clarification of 173.301  
**Date:** Wednesday, April 27, 2022 4:30:18 PM

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22-0035

Hello Alice,

Please see the below interpretation request.

Should you have any questions, do not hesitate to reach out.

Regards,

-Breanna

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**From:** Mike R Stephens <mike.r.stephens@linde.com>  
**Sent:** Wednesday, April 6, 2022 4:53 PM  
**To:** INFOCNTR (PHMSA) <INFOCNTR.INFOCNTR@dot.gov>  
**Cc:** Mike R Stephens <mike.r.stephens@linde.com>  
**Subject:** RE: Clarification of 173.301

**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.

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**From:** Mike R Stephens  
**Sent:** Tuesday, March 29, 2022 2:26 PM  
**To:** [PHMSAPortal@dot.gov](mailto:PHMSAPortal@dot.gov)  
**Subject:** Clarification of 173.301(f)(5)(iv), 173.301 b(c)(ii) and 173.301 (k)

To Whom it May Concern,

In accordance with 49 CFR 105.20, I am writing to you seeking guidance regarding the below referenced regulations;

We fill and ship dual marked DOT 3AA and UN ISO 9809 with Pi marked cylinders made in USA containing Compressed Gas UN 3309 and UN 3305 mixtures. These steel cylinders are not equipped with a PRD and the valve is protected by a steel cap that is secured to the cylinder.

We would like to request an interpretation regarding

- 173.301(f)(5)(iv) regarding PRD requirements on dual marked DOT 3AA and UN 9809 Pi marked cylinders.
- 173.301 b(c)(ii) regarding Pressure receptacle valve protection and
- 173.301 (k) regarding the clarification of “Metal Attachments”

**Question 1:**

A). Does our dual marked DOT 3AA/ UN ISO 9809 Pi marked steel cylinders described above meet the requirement of 173.301(f)(5)(iv) in that no PRD is required on the cylinder in use for domestic and foreign shipment?

B). Does the use of a steel cap that conforms to ISO 11117:2008 meet the requirement of 173.301 b (c)(2)?

C). Is the use of a Cylinder cap on the cylinder considered a “Metal Attachment” in 173.301 (k)? (Picture of Cylinder cap device below)



**Question 2:**

Can I get an update of DOT SP-6349, tracking number 2021124691?

**Question 3:**

Can I get an update on the modification request for DOT SP-14163, tracking

number 2022024604?

Mike Stephens  
Manager Distribution Compliance  
Linde Gas & Equipment Inc.  
[Mike.R.Stephens@Linde.com](mailto:Mike.R.Stephens@Linde.com)  
Cell 314-568-6764

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