



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

1200 New Jersey Avenue, SE
Washington, DC 20590

December 30, 2024

Graeme McPhee
Director of Hazardous Materials
National Cargo Bureau
180 Maiden Lane
Suite 903
New York, NY 10038

Reference No. 24-0097

Dear Mr. McPhee:

This letter is in response to your October 2, 2024, email requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to marking cargo transport units (CTUs) with the appropriate United Nations (UN) identification number for poison inhalation hazard (PIH) materials. Specifically, you ask a series of questions regarding the requirement for PIH materials found in § 171.23(b) as it relates to the § 172.313(c) marking requirements for PIH materials when loaded on a CTU and provide us your understanding. Note that it is our understanding that the questions relate to loading of non-bulk packages at one facility. Further, you seek clarification regarding the marking of CTUs with the appropriate identification number for PIH materials.

We have paraphrased and answered your questions as follows:

- Q1. You ask which identification number should be displayed for one shipment containing 800 kg of a PIH material in Hazard Zone A when combined with 1,200 kg of a PIH material in Hazard Zone B.
- A1. In accordance with § 172.313(c), a CTU containing a PIH material in non-bulk packages shall be marked on each side and each end if it meets conditions in § 172.313(c)(1) and (c)(2). Although the CTU contains materials in different hazard zones, only the Hazard Zone B material is present in 1,000 kg or more; therefore, the identification number for the material in Hazard Zone B shall be marked when loaded at one facility in non-bulk packages.

- Q2. You ask which identification number should be displayed for one shipment containing 1,100 kg of a PIH material in Hazard Zone A when combined with 1,200 kg of a PIH material in Hazard Zone B.
- A2. In accordance with § 172.313(c)(3)(ii), if the CTU contains more than one material meeting the conditions of § 172.313(c)(3) and the materials are in both Hazard Zone A and B, the CTU shall be marked with the identification number for the Hazard Zone A material.
- Q3. You ask whether a CTU that contains a PIH material in Hazard Zone A or Hazard Zone B with less than 1,000 kg would be a violation of the transport marking requirements if the identification number is displayed on all four sides of the CTU.
- A3. For purposes of the HMR, the answer is no. There is no prohibition when displaying the identification number as a person is allowed to permissively mark a container provided the marking represents the hazard present in the CTU. For purposes of the International Maritime Dangerous Goods (IMDG) Code, Section 5.3.2.1—Display of UN Markings—specifies the conditions when to properly mark a CTU, yet it also does not prohibit permissive marking of a CTU.
- Q4. You ask whether a CTU that contains only a PIH material in Hazard Zone C or Hazard Zone D with less than 4,000 kg would be a violation of the transport marking requirements if the identification number is displayed on all four sides of the CTU.
- A4. The answer is no, see answer A3.

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

Sincerely,



Dirk Der Kinderen
Chief, Standards Development Branch
Standards and Rulemaking Division

From: [Webb, Steven \(PHMSA\)](#)
To: [Dodd, Alice \(PHMSA\)](#)
Subject: FW: PIH - Display of UN Numbers
Date: Friday, October 18, 2024 12:01:42 PM
Attachments: [Outlook-cwzzumb.png](#)
[image002.png](#)

Alice,

Per conversation with the stakeholder please process the below questions as a request for interpretation. The requestors mailing address info is:

Graeme McPhee
Director, Hazardous Materials
National Cargo Bureau
180 Maiden Lane Suite 903
New York
NY 10038

Please let me know if you need additional info from me or the requestor.

V/R

Steve

Steve Webb

Assistant Coordinator International Program
Office of Hazardous Material Safety

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From: Graeme McPhee <mcphee@natcargo.org>
Sent: Wednesday, October 2, 2024 9:01 AM
To: Webb, Steven (PHMSA) <steven.webb@dot.gov>
Cc: Eric Rounds <rounds@natcargo.org>

Subject: PIH - Display of UN Numbers

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.

Good morning Steve,

Sorry to bother you, but I'm hoping you can offer some assistance here.

The issue is regarding 171.23(b)(10) and subsequently 172.313(c) and the marking of CTU's with the appropriate UN numbers for PIH's.

We need to provide proper instruction to our surveyors, but we are having some differences of opinion internally.

Could I please ask you to review the 4 questions below and comment if the answers are incorrect? If we have these answers, it will help us understand 172.313(c) better.

Q1. Which UN number should be displayed for one shipment containing 800 Kg of Zone "A" combined with 1200Kg of Zone "B"?

A1. The shipment first has to meet with (1) and (2).... so, in this scenario only the 1200kg of Zone "B" meets both (1) and (2). Therefore, it is the UN# for that Zone "B" commodity that would be displayed on both sides, and both ends of the container.

Q2. Which UN number should be displayed for one shipment containing 1100 Kg of Zone "A" combined with 1200Kg of Zone "B"?

A2. Zone "A" UN number to be displayed, due to both commodities meeting (1) and (2) and then we apply - (ii) For different materials in both Hazard Zones A and B, with the identification number for the Hazard Zone A material."

Q3. If the container has Zone A or Zone B commodities with less than 1,000kg, and the UN number is displayed on all 4 sides of the CTU, is this a deficiency?

A3. Yes, UN not required under 49CFR and under IMDG Code. IMDG Code is not permissive, so, yes this is a deficiency.

Q4. If the container has only Zone C (or Zone D) commodity with less than 4,000kg, and the UN number is displayed on all 4 sides of the CTU, is this a deficiency?

A4. Yes, UN not required under 49CFR and under IMDG Code, IMDG Code is not permissive, so, yes this is a deficiency.

Regards

Graeme

Graeme McPhee

Director Hazardous Materials

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