



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue, SE
Washington, DC 20590

March 21, 2023

Ms. Simone Goncalves
Technical Manager
American Bureau of Shipping
1701 City Plaza Drive
Spring, TX 77389

Reference No. 22-0129

Dear Ms. Goncalves:

This letter is in response to your November 30, 2022, email and subsequent telephone conversations with a member of my staff requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to the testing of portable tanks. Specifically, you ask whether there are any “exemptions” from the dynamic longitudinal impact test requirement, specified in § 178.274(j)(6), for portable tanks containing “UN1977, Nitrogen, refrigerated liquid, 2.2” by highway transportation only.

As specified in § 178.274(j)(6), United Nations (UN) portable tanks used for the dedicated transportation of “Helium, refrigerated liquid,” UN1963, and “Hydrogen, refrigerated liquid,” UN1966, that are marked “NOT FOR RAIL TRANSPORT” in letters of a minimum height of 10 cm (4 inches) on at least two sides of the portable tank are excepted from the dynamic longitudinal impact test. However, there are certain scenarios where non-specification portable tanks may be used when transported by highway. For example, § 173.320(a) states that “atmospheric gases and helium, cryogenic liquids, in Dewar flasks, insulated cylinders, insulated portable tanks, insulated cargo tanks, and insulated tank cars, designed and constructed so that the pressure in such packagings will not exceed 25.3 psig under ambient temperature conditions during transportation are not subject to the requirements of this subchapter when transported by motor vehicle or railcar except as specified in paragraphs (a)(1), (a)(2), and (a)(3) of this section.” Therefore, a highway shipment of “UN1977, Nitrogen, refrigerated liquid, 2.2” may be

transported in a non-specification insulated portable tank, provided the portable tank is constructed so that the pressure will not exceed 25.3 psig under ambient temperature conditions during transportation and all applicable requirements of § 173.320 are met.

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 right.

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

From: [INFOCNTR \(PHMSA\)](#)
To: [Dodd, Alice \(PHMSA\)](#)
Cc: [Hazmat Interps](#)
Subject: FW: Interpretation Dynamic Impact Test
Date: Wednesday, November 30, 2022 3:25:16 PM

Hi Alice,

Please see the below interpretation request.

Let us know if you need anything else.

Regards,

-Breanna

From: Simone Goncalves <sgoncalves@eagle.org>
Sent: Wednesday, November 30, 2022 11:31 AM
To: INFOCNTR (PHMSA) <INFOCNTR.INFOCNTR@dot.gov>
Cc: Michael Kloesel <mkloesel@eagle.org>; Benninghoven, Neil (PHMSA) <james.benninghoven@dot.gov>
Subject: Interpretation Dynamic Impact Test

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Dear Sir/Madam,

I have a question regarding the dynamic impact test indicated in section 6.7.4.14.1 of IMDG and DoT 49 CFR 178.274 (j) (6). The regulations indicate that the dynamic impact test should be performed for portable tanks meeting the definition of containers in CSC. Is it possible to exempt the dynamic impact test for a cryogenic tank carrying Refrigerated Nitrogen (UN 1977) transported by road only? Also, could you please confirm that the dynamic impact test is applicable only for rail transportation?

Please find my information below:

- Full Name: [Simone Goncalves](#)
- Physical Mailing Address: [1701 City Plaza Dr, Spring, TX 77389](#)
- Telephone Number: [+1 936 900 2056](#)

Best Regards,
[Simone Gonçalves](#)
Technical Manager
Container Certification Department
281-877-6325 wk

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