



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue, SE
Washington, DC 20590

November 16, 2020

Russell Keith
Packgen
65 First Flight Drive
P.O. Box 1970
Auburn, ME 04211

Reference No. 20-0076

Dear Mr. Keith:

This letter is in response to your September 11, 2020, email requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to a flexible intermediate bulk container (IBC). You ask several questions regarding the flexible IBC testing and handling requirements when flexible IBCs are transported on pallets in commerce. Specifically, you ask the questions with regard to a flexible IBC that has been successfully tested without securely attaching it to a base pallet.

We have paraphrased and answered your questions as follows:

Q1. You ask whether the container (e.g., the flexible IBC) may be placed onto a base pallet for ease of handling in transport.

A1. The answer is yes.

Q2. You ask whether the flexible IBC may be placed on a base pallet without any means of secure attachment.

A2. The answer is yes; however, for purposes of transportation, packages must be secured. For example, for motor vehicle transportation, any package containing a hazardous material not permanently attached to a motor vehicle must be secured against shifting, including relative motion between packages, within the vehicle on which it is being transported under conditions normally incident to transportation (see § 177.834(a)).

Q3. You ask whether the flexible IBC may be securely attached to a base pallet, via mechanical device nails, staples, strapping, or stretch wrapping.

- A3. The answer is yes. Securely attaching the flexible IBC to a base pallet with mechanical device nails, staples, strapping, or stretch wrapping is not prohibited as long as the attachment does not affect compliance with general and specification packaging requirements in Parts 173 and 178 of the HMR, and provided such securement methods do not permanently secure the flexible IBC to a base pallet. In the instance where the flexible IBC is permanently secured to a base pallet, it would likely be considered a new design type subject to further testing.
- Q4. You ask whether any of the methods of securing the flexible IBC to a base pallet (e.g., mechanical device nails, staples, strapping, or stretch wrapping) constitute an “overpack” as defined in § 173.25.
- A4. The answer is yes. For purposes of the HMR, and as defined in § 171.8, an “overpack” means an enclosure that is used by a single consignor to provide protection or convenience in handling of a package or to consolidate two or more packages. An example of an overpack is a package placed or stacked onto a load board (i.e., a pallet) and secured by *strapping, shrink wrapping, stretch wrapping, or other suitable means* (emphasis added). Please note that securement methods that would permanently secure the flexible IBC to a base pallet would not be considered an overpack. Permanently securing the flexible IBC to a base pallet would likely be considered a new design type and would require further testing.
- Q5. You ask whether the act of securely attaching a flexible “13HX” IBC to a base pallet requires the packaging to be fully tested with a base pallet.
- A5. The answer is dependent on certain factors (see answer A3). In accordance with § 178.801(d), the packaging manufacturer must achieve successful test results for the design qualification testing at the start of production of each new or different IBC design type. The service equipment selected for this design qualification testing shall be representative of the type of service equipment that will be fitted to any finished IBC body under the design.

Furthermore, in accordance with § 178.803, flexible IBCs must undergo the vibration, top lift, stacking, drop, topple, righting, and tear tests. Note that flexible IBCs are neither subject to the bottom lift test nor are they subject to the top lift test if not designed to be top lifted. However, as indicated in answer A3, securely attaching a base pallet to the flexible IBC is not prohibited within the HMR, but further testing of the flexible IBC may be required depending on the manner of attachment.

- Q6. You ask whether the act of placing a flexible “13HX” IBC on a pallet without attachment to a base pallet requires the packaging to be fully tested with a base pallet.

A6. The answer is no. Also, see answer A5.

Q7. When testing is required, you ask whether the complete suite of tests (i.e., vibration, bottom lift, top lift, stacking, drop, topple, righting, and tear) is required or only the bottom lift test.

A7. See answer A5.

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

Sincerely,

A handwritten signature in blue ink, appearing to read "Dirk Der Kinderen". The signature is fluid and cursive, with a large initial "D" and "K".

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

From: [INFOCNTR \(PHMSA\)](#)
To: [Dodd, Alice \(PHMSA\)](#); [Hazmat Interps](#)
Subject: FW: Questions about pallets and IBCs
Date: Wednesday, September 16, 2020 11:57:55 AM
Attachments: [2020 Pallet Interpretations.pdf](#)

Dear Alice,

Please see attached for a letter of interpretation request. Please contact our office with any questions.

Thank you,
Sarah (HMIC)

From: Russ Keith [mailto:rkeith@packgen.com]
Sent: Friday, September 11, 2020 8:17 PM
To: INFOCNTR (PHMSA) <INFOCNTR.INFOCNTR@dot.gov>
Subject: Questions about pallets and IBCs

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.

Dear Sirs / Madams:

Attach is a PDF document with several questions regarding the use of base pallets in conjunction with Flexiable packagings. Should this not be the correct station please contact me so that I may direct the questiond to the proper people.

Regards,

Russell Keith
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Manufacturing / Development
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