



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

1200 New Jersey Avenue, SE
Washington, DC 20590

June 26, 2025

Brian Tyminski
President and CEO
Tym's LLC
721 Depot Drive
Anchorage, AK 99501

Reference No. 24-0042

Dear Mr. Tyminski:

This letter is in response to your June 4, 2024 email and subsequent emails and a phone call requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to marking and labeling requirements for aviation cylinders (*i.e.*, cylinders used on aircraft). Specifically, you present a scenario where it is your understanding that required markings and labels cannot be placed on Department of Transportation (DOT) specification cylinders packed in a strong non-bulk outer container because the cylinders are a component of a 14 CFR-approved aircraft part.

We have paraphrased and answered your questions as follows:

- Q1. Is placing DOT 3AA specification cylinders in a strong non-bulk outer container (*e.g.*, a fiberboard box) considered a combination package for purposes of the HMR? If so, can the DOT 3AA specification cylinder be transported without markings or labels in accordance with Part 172, Subparts D and E, respectively, if the strong non-bulk outer packaging is marked and labeled?
- A1. No. The configuration described is not a combination package. DOT 3AA cylinders are considered a single packaging and therefore must be marked and labeled appropriately. DOT specification cylinders not specifically listed in § 173.301(a)(9)—such as DOT 3AA cylinders—that are further packed in an outer container such as a fiberboard box is not a combination package and would be considered an overpack configuration subject to the requirements found § 173.25.
- Q2. Is placing DOT 3HT specification cylinders in a strong non-bulk outer container (*e.g.*, a fiberboard box) considered a combination package for purposes of the HMR? If so, can the DOT 3HT specification cylinder be transported without markings and labels in

accordance with Part 172, Subparts D and E, respectively, if the outside of the combination package is marked and labeled?

- A2. Yes. DOT 3HT specification cylinders are listed in § 173.301(a)(9) and are required to be packaged in a “strong outer packaging.” This combination package configuration requires marking and labeling of the outer packaging and does not necessitate marking and labeling the DOT 3HT cylinder. Furthermore, in accordance with § 173.301(a)(9), the outside of the combination packaging must be marked with an indication that the inner packagings (*e.g.*, DOT 3HT cylinders) conform to the prescribed specifications.

For an explanation of 14 CFR requirements as it relates to DOT specification cylinders installed on aircraft and whether they may display Part 172, Subpart D and E marks and labels, please contact the Federal Aviation Administration (FAA) at hazmatinfo@faa.gov.

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', is positioned above the printed name.

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

Jones, Jessie Jane CTR (PHMSA)

From: Kelley, Shane (PHMSA)
Sent: Tuesday, June 4, 2024 7:16 PM
To: Hazmat Interps
Subject: Fwd: Letter of Interpretation Request: Overpack for Aviation Cylinders
Attachments: Letter of Intrep 24-0010 5-10-2024.pdf; 20240604 OVERPACK marking request for interpretation Tyms LLC.pdf

Please process and thank you.

Shane C. Kelley
Director, Standards and Rulemaking
Office of Hazardous Materials Safety
Pipeline and Hazardous Materials Safety Administration
U.S. Department of Transportation
Office: (202) 366-8553
Mobile: (202) 308-4312

From: Brian Tyminski <brian@tymsllc.com>
Sent: Tuesday, June 4, 2024 7:03:43 PM
To: pipeline_interp_submittal <pipeline_interp_submittal@dot.gov>
Cc: Kelley, Shane (PHMSA) <shane.kelley@dot.gov>; Burger, Donald (PHMSA) <donald.burger@dot.gov>; Tom Ferguson <Tom@costha.com>
Subject: Letter of Interpretation Request: Overpack for Aviation Cylinders

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 afternoon,

Please see the attached request for a Letter of Interpretation for 49 CFR 173.301(a), 173.25(a), 178.35, 178.47, 171.8. This was produced, in part, in response to the Letter of Interpretation Reference No. 24-0010 dated May 10, 2024. That letter unfortunately opened additional questions raised by the aviation industry when shipping common oxygen and fire bottles containing compressed gases.

This request serves to support the operations of aircraft repair stations and aircraft owners, operators, and parts distributors, in addition to our own shipping operations.

I have cc'd in the Council on the Safe Transportation of Hazardous Articles (COSTHA) as a member organization and for the benefit of the many airline and air repair station members affected by the issue presented.

Our official request is attached as a formal letter.

Below, please find a summary of the problem faced by industry, written for the layman, in order to gain insight on the regulatory clarifications described in the request to assist you with processing the attached request.

Problem:

All DOT specification cylinders 2P, 2Q, 3E, 3HT, 4BA, 4D, 4DA, 4DS, and 39 and many Special Permit cylinders are required to be placed in a strong outer containers (box, crate, etc.) when shipped. This is in accordance with 49 CFR § 173.301(a)(9), which is the law that dictates how gasses and all other Hazardous Materials in cylinders must be shipped. Manufacturing Special Permits (SP), such as DOT-SP 7945 and DOT-SP 8495, also list this law as a requirement within the SP document, so they must be packaged the same way.

Confusion has plagued the industry because carriers like Federal Express (FedEx) require all gas cylinders, of any type, to be packed in specific types of strong outer containers. Although it is not federal law, these carriers will not pick up or deliver shipments of gas cylinders unless they are protected with additional packaging.

Specifically, carriers like FedEx are looking for an “OVERPACK” marking on the outer-most box. This indicates to the carrier that the package meets the policy requirements. If this word does not appear, some carriers will reject and return your package for non-compliance, even though it complies fully with federal laws.

The problem is that the word “OVERPACK” is a marking that may only be applied to the package if it meets the stringent requirements of 49 CFR 173.25, which is the federal law that dictates when and how this marking should be applied. Simply, the OVERPACK marking may not be applied if the package is not an overpack. This was recently solidified in a DOT Letter of Interpretation Reference No. 24-0010 dated May 10, 2024.

The problem is that all aviation compressed gas cylinders such as oxygen bottles, fire extinguishers, and fire bottles, while legal to ship, may not comply with the requirements to mark OVERPACK on the outer container. They are shipped properly in a combination of packaging that includes the component (with a cylinder attached) in addition to outer packaging such as boxes, crates, or ATA 300 specification containers. Therefore, they are packaged properly per federal law but are being rejected due to inappropriate application of carrier policy.

The above-mentioned Letter of Interpretation Reference No. 24-0010 was written to solve this problem and ensure that the carrier understood that the shipments were both legal to ship, safe to carry, and compliant with internal policies.

Unfortunately, the lack of detail in the request and very detailed response by the DOT made the problem even worse.

It could be inferred by the DOT response that all specification cylinders require the OVERPACK marking and Special Permit cylinders do not. We do not believe this is accurate based on the rules in

49 CFR § 173.301(a), 173.25(a), 178.35, 178.47, and 171.8. Doing so may be a violation, and if so, will lead to enforcement action, fines, and other penalties for shippers and carriers merely trying to do the right thing.

Additional information is needed to clarify the situation to remove the confusion, once and for all.

Best Regards,

Brian Tyminski
Tym's LLC
721 Depot Drive
Anchorage, AK 99501
+1-425-200-5355
Brian@tymslc.com



Tym's LLC
721 Depot Drive
Anchorage, AK 99501 USA
+1-425-200-5355
www.tymsllc.com

June 4, 2024

Office of Pipeline Safety (PHP-30) PHMSA
U.S. Department of Transportation
1200 New Jersey Avenue SE.
Washington, DC 20590-0001
pipeline_interp_submittal@dot.gov

To Whom it May Concern:

We are writing for clarification on the Letter of Interpretation Reference No. 24-0010 dated May 10, 2024, in addition to 49 CFR 173.301(a), 173.25(a), 178.35, 178.47, 171.8, and DOT-SP 12726. The Letter of Interpretation is attached.

We are requesting further clarification regarding Answer "A4" of the Letter of Interpretation which states:

...when the SP requires the use of a strong outer packaging—as in DOT-SP 7945 paragraph 8.g. or DOT-SP 8495 paragraph 8.g.—the outer packaging does not meet the definition of an overpack, and therefore, "OVERPACK" is not an appropriate marking.

Also note, DOT-SP 12726 paragraph 7.a. authorizes the use of both non-DOT specification cylinders and DOT specification cylinders, and—when DOT specification cylinders are used—the "OVERPACK" marking is required unless the markings representative of each package type contained in the overpack are visible from outside of the overpack.

Please note that DOT-SP 7945 paragraph 8f (not 8g) states: "The cylinder must be shipped in strong outside packagings in accordance with 173.301(a)(9)" and that DOT-SP 8495 paragraph 8g states similarly: "The cylinders must be shipped in strong outside packagings in accordance with 173.301(a)(9)."

We understand and agree that Overpack must be used "when specification packagings are required" in accordance with 49 CFR 173.25(a)(4). We appreciate how your answers explain that no Overpack should be used for Special Permit cylinders based on the fact that the SP requires "strong outside packagings" with a specific reference to 173.301(a)(9), which is reserved for specification 2P, 2Q, 3E, 3HT, 4BA, 4D, 4DA, 4DS, and 39 cylinders.

In other words, the Special Permit cylinders mentioned in the letter (DOT SP-7945, DOT SP-8495) cannot be offered for transportation in a single packaging because the Special Permits state an outer packaging is a requirement based on 173.301(a)(9). If an outer packaging is required, it is not an Overpack because

the inner packaging cannot be offered for transportation by itself. That is, a combination package must always be used for these types of cylinders. Is that correct?

Your response refers to specification cylinders 3HT, 4DS, and 4DA (4DA by reference to DOT SP-12726). Your office states that these require Overpack because they are specification cylinders and based on the plain language of 49 CFR 173.25(a)(4) which states "The overpack is marked with the word "OVERPACK" when specification packagings are required," they are required to be marked as an Overpack. It is obvious that when in some "strong non-bulk outer packagings" (i.e. fiberboard boxes, crates, etc.) "the required markings representative of each package type contained in the overpack" (i.e. cylinder specification marking, labeling, etc.) will not be "visible from outside of the overpack" and that is why an Overpack must be used. Is that correct?

We have additional questions regarding 49 CFR 173.301(a)(9) which states:

Specification 2P, 2Q, 3E, 3HT, spherical 4BA, 4D, 4DA, 4DS, and 39 cylinders must be packed in strong non-bulk outer packagings. The outside of the combination packaging must be marked with an indication that the inner packagings conform to the prescribed specifications.

It appears that the specification cylinders in question require "strong outer packaging" just as the DOT-SP 7945 and DOT-SP 8495 cylinders do. Our questions are as follows:

- 1) If a specification cylinder IS REQUIRED to ship gases but offered under a DOT SP instead, does that change the requirement for use of an Overpack? The plain language of 49 CFR 173.25(a)(4) states Overpacks are used when specification cylinders are "required." Gasses are always "required" to be in specification cylinders IAW 49 CFR 173.301(a)(1). Therefore, are Overpacks also always "required," even for Special Permit cylinders?
- 2) If a Special Permit cylinder does not require Overpack based on the language of the SP for "a strong outer packaging" (see Letter of Interpretation Reference No. 24-0010 answer A4), why are specification cylinders offered without the SP, which require "strong non-bulk outer packagings," treated differently? Isn't the DOT-SP marking also required and not visible just as the DOT specification marking for a specification cylinder? See SP 7945 paragraph 7b and SP 8495 paragraph 7a (marking) which describes marking requirements IAW 49CFR 178.35 and 178.47 for these cylinders.
- 3) 49 CFR 173.301(a)(9) is referenced in the Special Permit and applicable to the specification cylinders in question. Therefore, the same requirement for a combination package exists and the outer container is required in addition to the inner package. Is that correct?
- 4) Based on the definition of Overpack in 49 CFR 171.8, if an item cannot be shipped as a single package wouldn't the outer box be part of the combination package and not an Overpack? In this case, 3HT, 4DA, and 4DS cylinders containing gasses must always be placed in "strong outer packagings." Therefore, these combination packages do not require an Overpack unless the outer packaging is "placed or stacked onto a load board such as a pallet and secured by strapping, shrink wrapping, stretch wrapping, or other suitable means or placed in a protective outer packaging such as a box or crate." Is that correct?
- 5) 49 CFR 173.301(a)(9) states "the outside of the combination packaging must be marked with an indication that the inner packagings conform to the prescribed specifications." Does the word "OVERPACK" on a box containing gasses IAW 173.301(a)(9) (i.e. gasses in specification cylinders requiring a combination package), for which 49 CFR 173.25(a) applies (i.e. an Overpack), qualify as "an indication that the inner packagings conform to the prescribed specifications"? In other

words, can the marking "OVERPACK" replace the marking "inner packagings conform to the prescribed specifications" in this case?

- 6) If the combination package described in question 5 does not comply with 49 CFR 173.25(a) (i.e. is not an Overpack), is the marking "inner packagings conform to the prescribed specifications" required to be on the outer container for Special Permit cylinders, just specification cylinders, neither, or both?
- 7) In regard to question 5, does each outer packaging conforming to 49 CFR 173.301(a)(9) (e.g. 3HT cylinder packed in a fiberboard box) also require the marking "inner packagings conform to the prescribed specifications," in addition to the "OVERPACK" marking?
- 8) The articles in question are aircraft fire extinguishers which contain non-flammable gas. They do not have non-flammable gas labels or markings with the proper shipping name (as would be found on an industrial gas cylinder, for example). These labels/markings cannot be placed on the cylinders because the cylinders are a component of a 14CFR approved aircraft part. As such, no additional labels may be placed on the articles and no FAA approved labels exist with the hazard label or proper shipping name marking. If the inner packagings DO NOT conform to the prescribed specifications (Ex: the proper shipping name marking and non-flammable gas label are not present on the inner cylinder in the combination package), is it still an Overpack?
- 9) For the scenario in question 8, it would also be inappropriate to mark the outer package "inner packagings conform to the prescribed specifications," correct?

We appreciate your time and patience with this request and believe that the answers you provide will ensure clarification and compliance with all aircraft repair stations, owners, operators, and distributors that wish to comply fully with the HMR.

Best Regards



Brian Tyminski
Tym's LLC



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

1200 New Jersey Avenue, SE
Washington, DC 20590

May 10, 2024

Mr. Patrick Schoenhoff
General Manager
AMETEK AMERON
10271 Bach Boulevard
Saint Louis, MO 63132

Reference No. 24-0010

Dear Mr. Schoenhoff:

This letter is in response to your February 20, 2024, letter requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to the overpack marking requirements in § 173.25 as they relate to cylinders.

We have paraphrased and answered your questions as follows:

- Q1. You present a scenario where oxygen is shipped in Department of Transportation (DOT) 3AA or 3HT specification cylinders, placed in a fiberboard box, and marked “UN1072, Oxygen, Compressed.” You ask whether the fiberboard box must be marked “OVERPACK” as described in § 173.25(a)(4).
- A1. The answer is yes, provided the configuration meets the definition of an overpack, as defined in § 171.8, and the specification markings on the cylinders are not visible through the overpack. As prescribed in § 173.25(a)(4), the word “OVERPACK” is required to be marked on an overpack if package specification markings—when required—are not visible.
- Q2. In connection to question Q1, you ask whether it is a violation of the HMR to mark a fiberboard box with “OVERPACK” if it does not meet the definition of an overpack as defined in § 171.8.
- A2. The answer is yes. Marking a fiberboard box with “OVERPACK” is a violation of the HMR if it does not meet the definition of an overpack as defined in § 171.8.

- Q3. You present a scenario where fire extinguishers are shipped under DOT Special Permits (SPs)—DOT SP-7945,¹ DOT SP-8495,² and DOT SP-12726³—and marked “UN1044, Fire Extinguishers.” You ask whether the “OVERPACK” mark is required on the fiberboard box containing fire extinguisher cylinders shipped under DOT SP-7945, DOT SP-8495, and DOT SP-12726.
- A3. Except when transported in DOT specification cylinders (see DOT-SP 12726 paragraph 7.a), the answer is no. The SPs referenced in your letter—DOT SP-7945 and DOT SP-8495—state: “non-DOT specification cylinder conforming with all regulations applicable to a DOT specification 4DS cylinder.” Though specification 4DS cylinders do require the “OVERPACK” marking when enclosed in a fiberboard box, in accordance with § 173.25(a)(4), the overpack marking is not required for DOT-SP 7945 and DOT-SP 8495, since the cylinders in question are not considered to be DOT specification cylinders (please also see answer A4). As such, the “OVERPACK” marking is also not required under DOT SP-12726, when non-DOT specification cylinders are used as specified in paragraph 7.a.
- Q4. In connection to question Q3, you ask whether it is a violation of the HMR to mark a fiberboard box with “OVERPACK” if it does not meet the definition of an overpack as defined in § 171.8.
- A4. See answer A2. However, when the SP requires the use of a strong outer packaging—as in DOT-SP 7945 paragraph 8.g. or DOT-SP 8495 paragraph 8.g.—the outer packaging does not meet the definition of an overpack, and therefore, “OVERPACK” is not an appropriate marking.

Also note, DOT-SP 12726 paragraph 7.a. authorizes the use of both non-DOT specification cylinders and DOT specification cylinders, and—when DOT specification cylinders are used—the “OVERPACK” marking is required unless the markings representative of each package type contained in the overpack are visible from outside of the overpack.

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

Sincerely,



Steven Andrews
Acting Chief, Regulatory Review and Reinvention Branch
Standards and Rulemaking Division

¹ <https://www.phmsa.dot.gov/hazmat/documents/offer/SP7945.pdf/2022024177/SP7945>

² <https://www.phmsa.dot.gov/hazmat/documents/offer/SP8495.pdf/2021114098/SP8495>

³ <https://www.phmsa.dot.gov/hazmat/documents/offer/SP12726.pdf/2020064323/SP12726>

Pollack

From: [INFOCNTR \(PHMSA\)](#)
To: [Dodd, Alice \(PHMSA\)](#)
Cc: [Hazmat Interps](#)
Subject: FW: Overpack Interpretation Request
Date: Friday, February 23, 2024 2:13:21 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[Overpack Clarification Request.pdf](#)

24-0010

Hi Alice,

Please see the attached interpretation request. Let us know if you need anything.

Sincerely,
Janaye

From: Patrick Schoenhoff <patrick.schoenhoff@ametek.com>
Sent: Tuesday, February 20, 2024 2:23 PM
To: PHMSA HM InfoCenter <PHMSAHMInfoCenter@dot.gov>
Subject: Overpack Interpretation Request

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,

Please see the attached request for Interpretation of the use of Overpack labels on packages containing charged cylinders.

Feel free to contact me with any questions you have with this request.

Best regards,

Patrick Schoenhoff

Technical Director / General Manager



D: +1 314 428 2062 x1077 | O: +1 314 428 2062 | E: patrick.schoenhoff@ametek.com
10271 Bach Boulevard
Saint Louis, MO 63132
www.ameronglobal.com



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AMERON
10271 BACH BOULEVARD
SAINT LOUIS, MO 63132
314-428-2062 PH

February 20, 2024

Mr. Shane Kelley
Director, Standards and Rulemaking Division
U.S. DOT/PHMSA (PHH-10)
1200 New Jersey Avenue, SE East Building, 2nd Floor
Washington, DC 20590

Mr. Kelley,

I am requesting a Letter of Interpretation for the Overpack labeling of packages in the following scenarios.

Scenario 1: An Oxygen Cylinder with a DOT rating of either 3AA or 3HT is packaged in a fiberboard box. The box is marked with UN1072 Oxygen, Compressed labels.

Question 1: Does the above packaging constitute being labeled as an “Overpack”?

Question 2: If not meeting the definition or requirement of an “Overpack”, is marking the box as an Overpack a violation of the regulations?

Scenario 2: A Fire Extinguisher Cylinder with a DOT SP rating of SP-8495 or SP-7945 is packaged in a fiberboard box. The box is marked with UN1044, Fire Extinguishers SP-12726 labels and then shipped per SP-12726 (of which we hold Party Status).

Question 3: Does the above packaging constitute being labeled as an “Overpack” with an SP cylinder?

Question 4: If not meeting the definition or requirement of an “Overpack”, is marking the box as an Overpack a violation of the regulations?

Thank you for your help on this matter, and feel free to contact me if you have any questions regarding these scenarios.

Best Regards,
Patrick Schoenhoff
General Manager
AMETEK AMERON
10271 Bach Boulevard
Saint Louis, MO 63132
314-428-2062 X1077
E-mail: patrick.schoenhoff@ametek.com