



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue, SE
Washington, DC 20590

JUL 13 2018

Kristie Absher
Senior Consultant
Environmental Resource Center
101 Center Pointe Drive
Cary, NC 27513

Reference No. 18-0013

Dear Ms. Absher:

This letter is in response to your December 11, 2017 letter; your subsequent January 25, 2018 letter; and a recent phone conversation with a member of my staff requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to authorized quantity exceptions for hazardous materials.

Specifically, you provide six scenarios where you have an inner receptacle (tube) that contains two materials¹ in different quantities. You state that Material A (i.e., “UN3089, Metal powders, flammable, n.o.s., 4.1, II”) will be tightly compacted in the bottom portion of the tube and Material B will be placed loosely inside the tube above Material A without a physical barrier separating the two components from mixing.

We have paraphrased and answered your questions as follows:

- Q1. You ask if the small quantity limit in § 173.4 applies only to Material A or to the combined amount of Material A and Material B in the inner receptacle with respect to the 30-gram limit for a Division 4.1 hazardous material.
- A1. The small quantity limit applies to the hazardous material, Material A. Based on the information you provided and the understanding that Material B is not a hazardous material in accordance with the HMR, Material A cannot exceed the maximum inner receptacle quantity limit of 30 grams (1 ounce) for a Division 4.1, PG II, flammable solid material.
- Q2. You ask if the excepted quantity limit in § 173.4a applies only to Material A or to the combined amount of Material A and Material B with respect to the 30-gram limit per

¹ One of the materials is not classified as hazardous material per the HMR but is an environmentally hazardous substance internationally (UN3077).

inner packaging and 500-gram limit per outer packaging for Division 4.1, Packing Group (PG) II material.

- A2. The excepted quantity limits apply to the hazardous material, Material A. Based on the information you provided, Material A may not exceed the maximum inner packaging limit of 30 grams (1 ounce) for solids. In addition, the outer packaging aggregate quantity limit for Material A cannot exceed the maximum aggregate quantity limit of 500 grams (1.1 pounds) for solids.
- Q3. You ask if the limited quantity limit in § 173.151 applies only to Material A or to the combined amount of Material A and Material B when the quantity for a Division 4.1, PG II material is limited to 1 kilogram per inner packaging.
- A3. The limited quantity limit of 1 kilogram applies to the net capacity of the inner packaging and not the amount of Material A or the combined amount of Material A and Material B. Therefore, in this instance, the limit would apply to the inner packaging that contains both Material A and Material B.
- Q4. You ask if the entry (i.e., the hazardous material description) on a shipping paper must indicate the weight of Material A only or the combined weight of Material A and Material B.
- A4. Section 172.202(a)(5) requires indication of the total quantity of hazardous materials covered by the description and the applicable unit of measurement (e.g., kilograms), which applies to Material A only. However, additional information may be provided after the basic description to communicate that additional non-hazardous material is also in the package.
- Q5. You ask if for air shipments the entry on a shipping paper must indicate the total mass of Material A only or the combined mass of Material A and Material B.
- A5. Section 172.202(a)(6) requires the total net mass of the hazardous material per package to be indicated on the shipping paper unless a gross mass is indicated in Columns (9A) and (9B) of the § 172.101 Hazardous Materials Table, in which case the total gross mass per package must be indicated. Material A (UN3089) specifically indicates a net mass in Column (9A) for passenger aircraft and a net mass in Column (9B) for cargo aircraft. If the package is transported via aircraft, the net mass may not exceed 15 kilograms (33 pounds) on a passenger aircraft or 50 kilograms (110 pounds) on a cargo-only aircraft for a PG II package. In addition, § 172.202(a)(6)(vii) requires hazardous materials in limited quantities the total net quantity per package to be indicated unless a gross mass is indicated in column 4 of § 173.27 Table 3, in which case the total gross mass per package must be indicated. Please note, Table 3 allows a maximum authorized net quantity of 5 kg (11 lbs.) for the outer package of a Division 4.1, PG II hazardous material.
- Q6. You ask if your product meets the HMR definition for “mixture” even though it contains two distinct and separate components in the same tube (i.e., may test results obtained

from a thorough mixing of the two components be used for hazard classification purposes even if the components are layered for shipping purposes).

- A6. The HMR defines "mixture" as a material composed of more than one chemical compound or element (see § 171.8). Based on the information you provided, it is the opinion of this Office that the contents in the tube as prepared for transportation are not considered a mixture since both materials are distinct and separate in the tube. According to the test report data provided, Material A and Material B were tested as a mixture and determined to no longer meet the definition of a Division 4.1 material. However, the product was not tested in the form in which it will be transported in commerce and you cannot use these test results to be excluded from being a Division 4.1 hazardous material.

Please note, if a facility tested both Material A and Material B in the manner in which the tube will be transported in commerce and proved the product is no longer a Division 4.1 material, then your product would not be subject to the HMR.

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

Baker
Exceptions + Shipping papers
18-0013

January, Ikeya CTR (PHMSA)

From: INFOCNTR (PHMSA)
Sent: Friday, January 26, 2018 2:43 PM
To: Hazmat Interps
Subject: FW: Request for Interpretation
Attachments: Request for Interpretation.pdf

Hello all,

Please see below and attached LOI request. Spoke to the requestor, she confirmed that her company mailed the letter to us on the 11th of December, but she never received a receipt of reply from us. She re-sent yesterday to ensure that we have received her request.

Regards,

-Breanna

From: Kristie Absher [mailto:kabsher@ercweb.com]
Sent: Thursday, January 25, 2018 11:56 AM
To: INFOCNTR (PHMSA) <INFOCNTR.INFOCNTR@dot.gov>
Subject: Request for Interpretation

Dear DOT Representative:

Attached is a letter requesting interpretation of the DOT Hazardous Materials Regulations. My company mailed the letter on December 11 but when I called the Hazardous Materials Info Center today for an update, your representative Alex could not locate the letter in your files. She suggested that I resend the letter via e-mail o this address to receive assistance.

I look forward to hearing your response to the questions posed.

Thank you,
Kristie Absher
Environmental Resource Center
101 Center Pointe Dr.
Cary, NC 27513
919-469-1585 x 402
919-342-0807 fax
kabsher@ercweb.com
<http://www.ercweb.com>

Correct EHS violations before EPA, OSHA, or DOT find them. Contact Environmental Resource Center for a comprehensive environmental, safety, or hazardous material transportation audit. For details, contact service@ercweb.com.



December 11, 2017

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

Dear Mr. Kelley:

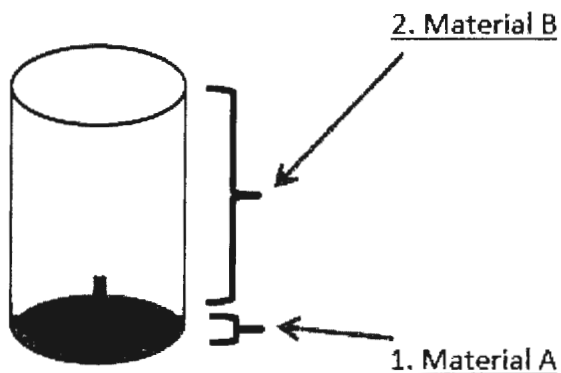
I am requesting assistance on quantity information for exceptions and shipping papers, and on the definition of a mixture. Your input is appreciated.

The products in question contain two components, in various quantities:

1. Material A
 - a. UN 3089, Metal powders, flammable, n.o.s., 4.1, II per DOT, IMO, and ICAO
2. Material B
 - a. Non-hazardous per DOT
 - b. UN 3077, Environmentally hazardous substance, solid, n.o.s. (dicopper oxide), 9, III due to aquatic toxicity per IMO and ICAO

Based on recent testing, when the components are thoroughly mixed, the resulting mixture does not meet the definition of Division 4.1 and would not be regulated for shipment. However, for shipping, the components in the product are layered, not mixed, in the same tube (inner package), as shown:

1. Material A is tightly compacted in the bottom grid of the tube
2. Material B is placed loosely in the tubes above Material A



When used, the loose Material B pours easily from the tube while Material A remains in the grid inside the tube. To loosen/remove Material A, the bottom of tube must be tapped.

Question 1, Small quantity exception (49 CFR 173.4): For Division 4.1 materials, the quantity per inner receptacle is limited to 30 grams. Does this quantity limit apply only to the hazardous Material A, or to the entire contents (Material A and non-hazardous Material B) in our tube?

Question 2, Excepted quantity exception (49 CFR 173.4a): For Division 4.1 Packing Group II materials, the quantity of hazardous material is limited to 30 grams per inner packaging and 500 grams per outer packaging. Do these quantity limits apply only to the hazardous Material A, or to the weight of the entire product (Material A and non-hazardous Material B) in our inner and outer packagings?

Question 3, Limited quantity exception (49 CFR 173.154): For Division 4.1 Packing Group II materials, the quantity is limited to 1 kilogram per inner packaging. Does this quantity limit apply only to the hazardous Material A, or to the weight of the entire product (Material A and non-hazardous Material B) in our inner packagings?

Question 4, Shipping papers (49 CFR 172.202(a)(5)): For ground shipments that require a shipping paper, the total quantity of hazardous materials must be indicated. Must this entry indicate the weight of the hazardous Material A only, or the weight of the entire product (Material A and non-hazardous Material B)?

Question 5, Shipping papers (49 CFR 172.202(a)(6)): For air shipments that require a shipping paper, the total net mass per package must be indicated. Must this entry indicate the total mass of the hazardous Material A only, or the mass of the entire product (Material A and non-hazardous Material B)?

Question 6, Definition of Mixture (49 CFR 171.8): Mixture is defined as a material composed of more than one chemical compound or element. Is this product considered a mixture per DOT because the components are in the same tube, even though they are separate, distinct layers with different hazards (Division 4.1 and non-hazardous)? If a mixture, may the test results obtained for a thorough mixing of the two components be used for hazard classification purposes, even though they are layered for shipping purposes?

Thank you for your assistance.

Sincerely,

Kristie Absher
Senior Consultant