



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue, SE
Washington, D.C. 20590

SEP 29 2016

Mr. Mark Connolly
Manager-Transportation Regulations and Security
Akzo Nobel Services, Inc.
525 W. Van Buren Street
Chicago, IL 60607-3823

Ref. No.: 16-0055

Dear Mr. Connolly:

This responds to your March 30, 2016 email regarding reduced size labels and markings under the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). Specifically, you seek confirmation that reduced size labels and markings are authorized for the packagings described in your scenario. In your incoming email, you note that your company is examining use of new small single packagings for transport of various organic peroxides for both domestic and international transport. In order to: (1) avoid the entanglement of tags containing standard size labels and markings during the automated package filling process; (2) allow stacking of packages without risk of labels or markings being pulled away from the package; and (3) ensure that all required labels and markings fit on the same side of the package, the reduced size labels and/or markings would be necessary. Your questions are paraphrased and answered as follows.

Q1. You provided a photograph for a 20 liter capacity specification package affixed with standard 100 x 100 mm hazard labels and marine pollutant mark along with the identification number and proper shipping name marked in accordance with the non-bulk 12 mm height requirement. You note that the hazard labels and marine pollutant mark must be bent over corners of the package in an attempt to fit them all on the same side with the identification number and proper shipping name. You also provided an illustration of the same package with reduced size 50 x 50 mm hazard labels and marine pollutant mark and ask if this is acceptable.

A1. In accordance with § 172.406(a)(1)(ii), labels must “[b]e located on the same surface of the package and near the proper shipping name marking, if the package dimensions are adequate.” The dimensions of the package in your scenario do not appear to adequately provide space for all of the relevant labels and markings, therefore the requirement that they are all placed on the same side would not apply. Based on the example provided, it appears that standard size hazard labels and markings could be placed on different sides of the package and that reduced size labels and markings would not be necessary. In addition, in

accordance with § 172.301(a)(1), for packages with a maximum capacity of 30 liters or less, the identification number may be reduced from 12 mm to 6 mm high.

Q2. You describe a smaller 6.5 liter specification package without a photograph and ask if reduced size 50 x 50 mm hazard labels and marine pollutant mark would be acceptable.

A2. See A1. If the dimensions of the package permit, standard size hazard labels and markings may be placed on different sides of the package. However, if the dimensions of the smaller 6.5 liter package cannot accommodate standard size labels and markings, it is the opinion of this Office that, to the extent necessary to prevent the labels and markings from being bent around the package corners and to accommodate the automated filling and subsequent stacking, the size of the labels and marking may be reduced. Based on the illustrations of the packages you provided, these packages would still satisfy the intent of the reduced size label provisions in § 172.407(c)(1)(i), the marine pollutant mark of § 172.322(e)(2)(i)(A) and the marking requirements of § 172.304 of the HMR.

Q3. When reducing hazard labels and the marine pollutant mark, must the size of all three be the same, such as 50 mm x 50 mm on each side?

A3. The answer is no. There is no requirement that all of the reduced size labels or marks displayed on the package must be equally reduced in size provided the symbol and other elements of the label and mark remain clearly visible.

Q4. Can the primary hazard label remain at a size of 100 mm x 100 mm while the subsidiary hazard label and marine pollutant mark are reduced to 50 mm x 50 mm?

A4. The answer is yes. There is no requirement that all of the reduced size labels or marks displayed on the package must be the same size provided the symbol and other elements of the label and mark remain clearly visible.

Q5. What is the minimum size of the reduced size labels and marine pollutant marking?

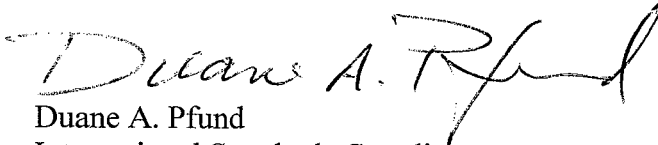
A5. A minimum size for reduced size labels is not prescribed. In accordance with § 172.407(c)(1)(i), if the size of the package so requires, the dimensions of the label and its features may be reduced provided the symbol and other elements of the label remain clearly visible. For non-bulk packages required to display the marine pollutant mark, a minimum size is not specified; however, in accordance with § 172.322(e)(2)(i)(A) “[i]f the size of the package so requires, the dimensions/line thickness may be reduced, provided the marking remains clearly visible and all features shall be in approximate proportion to those shown” in the image of the marine pollutant mark in § 172.322(e)(1).

Q6. You state that your package has an indented center band which is approximately 4 inches in height across the middle of the package side. Your marketing department would prefer to enhance the “look” of the package by reducing the size of all transport labels and markings to fit into the 4 inch center band. It is your understanding that this would be a violation of the HMR.

A6. Your understanding is correct, reduced size labels and markings may only be used if the size of the package so requires and not for aesthetic reasons (see §§ 172.407(c)(1)(i) and 172.322(e)(2)(i)(A)).

I hope this information is helpful. If you have further questions, please do not hesitate to contact this office.

Sincerely,

A handwritten signature in cursive script that reads "Duane A. Pfund". The signature is written in dark ink and is positioned above the printed name and title.

Duane A. Pfund
International Standards Coordinator
Standards and Rulemaking Division

Wiener
§ 172.407(c)(i)
Marine Pollutant
16-0055

Dodd, Alice (PHMSA)

From: Goodall, Shante CTR (PHMSA)
Sent: Thursday, March 31, 2016 7:09 AM
To: Dodd, Alice (PHMSA)
Subject: FW: DOT Clarification for Acceptable Reduction of Transport Hazard Labels and Marine Pollutant Marks on Small UN specification Single Packages of Organic Peroxides for Domestic and International Transport
Attachments: image005.emz; image003.emz
Importance: High

From: Betts, Charles (PHMSA)
Sent: Wednesday, March 30, 2016 5:25 PM
To: Hazmat Interps
Subject: FW: DOT Clarification for Acceptable Reduction of Transport Hazard Labels and Marine Pollutant Marks on Small UN specification Single Packages of Organic Peroxides for Domestic and International Transport
Importance: High

Please log and assign for response.

From: Connolly, M (Mark) [<mailto:Mark.Connolly@AkzoNobel.com>]
Sent: Wednesday, March 30, 2016 5:19 PM
To: Betts, Charles (PHMSA)
Subject: DOT Clarification for Acceptable Reduction of Transport Hazard Labels and Marine Pollutant Marks on Small UN specification Single Packages of Organic Peroxides for Domestic and International Transport
Importance: High

Hi Charlie,

Our company is examining the use of some new small single packages for the transport of various organic peroxides.

As an ongoing evaluation for reduction of packaging costs we've obtained some new UN specification designs which have passed the various UN performance testing and are much smaller than our current packages. The significant cost reduction (eliminating outer fiberboard box) will enable AkzoNobel to remain competitive in the global marketplace.

Per our discussions a few months ago – below is the email in which we need clarification concerning reduction of hazard labels and marine pollutant markings on small single nonbulk packages. Let me know what additional information you need – I've requested some labels from Labelmaster – unfortunately Labelmaster and other label suppliers do not typically print reduced size hazard labels – we must specific and special order on a case by case basis.

Applying tags which contain the hazard label(s) and transportation markings in the usual size is not viable as the packages are filled via an automation system and the tags may entangle during filling operations. Packages are also stacked upon each other for pallet unit loads and these actions may damage or accidentally rip a tag away from the package. Our desire is to affix strong self-adhesive labels which remain affixed in ambient and reduced temperatures to as low as -20C.

These new smaller packages will require the transportation hazard labels and Marine pollutant mark (if applicable) to be reduced as they and the appropriate transport markings cannot fit on one side of the package

in compliance with DOT [49CFR172.407(c)(i); and 172.3229 (e)(2)(i)(A)] and IMDG [5.2.2.2.1.1.3; 5.2.1.6.3 note1] transportation regulations and UN Recommendations [5.2.2.2.1.1.2, 5.2.2.2.1.1.3 and 5.2.1.6.3 note1] .

Note although the dimension of each hazard label is reduced there will be no reduction in the division number, hazard class number or 2 mm width of the external black line.

AkzoNobel is concerned that for transport of hazardous materials within the U.S. the reduction of transport hazard labels is not a regular occurrence on packages other than cylinders. Also, since these filled packages will be transported domestically and internationally – such changes may result in shipment frustration by carrier personnel. A review was made of the DOT interpretation letters and I could not locate any correspondence which included specific examples of acceptable reduced hazard labels.

Your review and feedback is appreciated for the examples noted below:

Example 1

20 liter capacity UN specification package prepared for transport by road and vessel for export (Width of side of package approximately 10 inches)

Transport classification for this shipment:

UN3109, ORGANIC PEROXIDE TYPE F, LIQUID (TERT BUTYL HYDROPEROXIDE70%), 5.2 (8), MARINE POLLUTANT

<u>Package Transport marking</u> <u>sides (not shown in this picture)</u>	and <u>Hazard labels:</u>	<u>on two adjacent opposing</u>
UN3109, vented cap) ORGANIC PEROXIDE TYPE F, LIQUID (TERT BUTYL HYDROPEROXIDE70%),	5.2, (8), marine pollutant mark	orientation arrows (due to use of

In order to be in compliance with both DOT and IMDG transport regulations it is my understanding that the transportation markings (UN number, PSN (technical name), RQ, etc. and hazard labels must be shown on the same side of the package. If the dimensions of the package do not allow the hazard labels to be 100mmx100mm on side they can be reduced in size as note in the various reference noted above.

Below one left is a photo of the described package with 100mmx100mm hazard labels UN3109 in 12mm height and marine pollutant marking adjacent to UN# and PSN (technical name) which is also the name of the marine pollutant. Note that the hazard labels actually must bend over corners in attempt to fit on one side of the package.

On right is an example of the same package with hazard labels and marine pollutant marked reduced to 50mmx50mm in size

<u>Current package Design with 100mmx100mm hazard labels and MP mark</u> <u>package size with 50mmx50mm hazard labels and MP mark</u>	<u>Proposed same</u>
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UN3109
ORGANIC PEROXIDE TYPE F, LIQUID
(TERT BUTYL HYDROPEROXIDE 70%).

The diagram shows three diamond-shaped hazard labels. The top-left label is for Organic Peroxide (5.2) with a flame icon. The bottom-center label is for Corrosive (8) with an icon of hands being corroded. The top-right label is for Environment with a tree and dead fish icon. Below the labels is a text box containing the hazard code and description.

- When reducing hazard labels and marine pollutant marking – Must size of all three by symmetrical (i.e. 50mmx50mm on side)?

Or

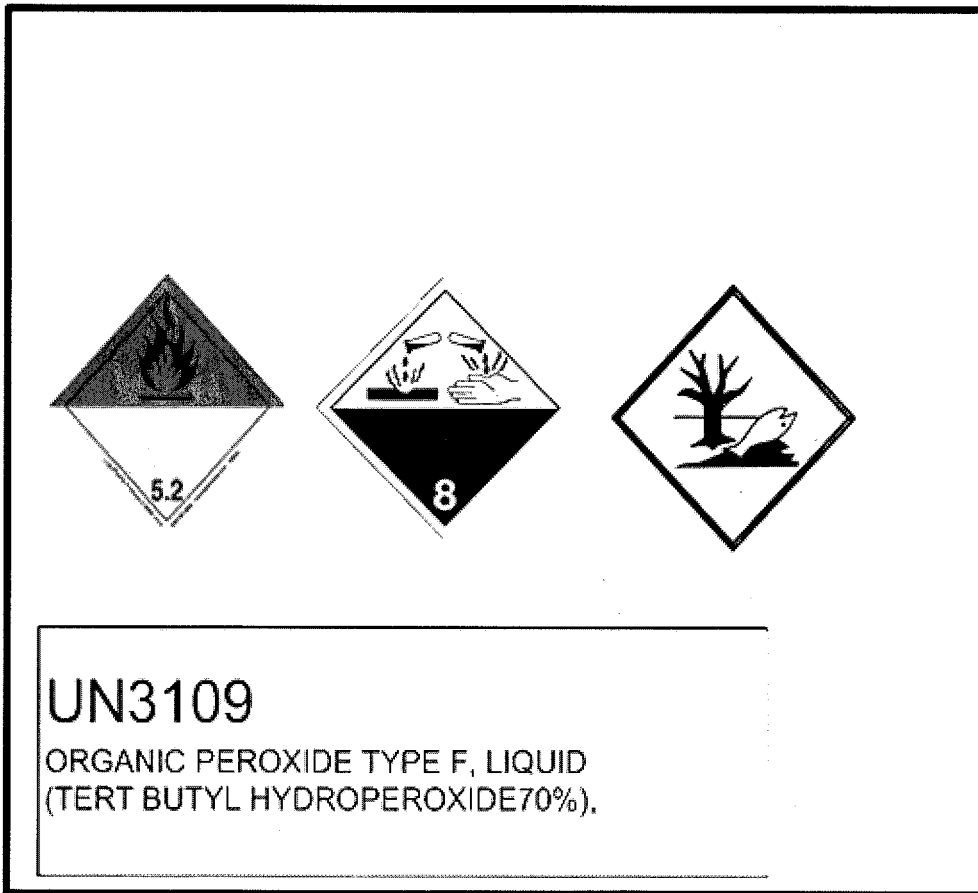
- Can the primary remain at 100mmx100mm and the subsidiary and marine pollutant be reduced to 50mmx50mm?
- Is there any limit to the reduction?

Point of clarification- The package has an indented centerband which is approximately 4 inches in height across the center of the face of the side of the package facing the camera. Our marketing department would prefer to enhance “look” of packaging by reducing the size of all transport hazard labels to fit into that 4 inch high centerband area. It is my understanding this would be a violation of DOT regulations as DOT specifies that hazard label reduction can only be made if the entire side of the package is too small for the hazard labels to fit.

Please clarify if you agree with this interpretation.

Below is an example of a package with hazard labels reduced to fit into 4 inch “centerband”

Example of hazard labels reduced to fit in “centerband”



Example 2

6.5 Liter capacity UN specification single package with dimensions noted below

Length	234 mm ± 2 mm (9.21 inches)
Width	198 mm ± 2 mm (7.8 inches)
Height	218 mm ± 3 (stacking: 218 mm) (8.58 inches)

The same questions that applied in example 1 toward reduction of the hazard labels apply to this example 2 of a package which is much smaller than the 20 L package.

Let me know if you need additional information or want to discuss further and I can make changes to the correspondence for use as a clarification letter for future use.

I'll call you later this week.

Regards,

Mark

Mark Connolly

Manager-Transportation Regulations and Security

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