



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

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

JUN -3 2010

Mark Anderson  
Dyno Nobel Inc.  
660 Hopmeadow  
P.O. Box 2006  
Simsbury, CT 06070

Ref. No.: 10-0088

Dear Mr. Anderson:

This responds to your e-mail dated April 20, 2010 regarding the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) as they apply to reduced size hazard warning labels for Class 1 (Explosives). You did not enclose a diagram or photograph depicting the orientation of the Class 1 (Explosives) label nor the dimensions of the box. Subsequently, an inspector provided photographs of orientation of the Class 1 (Explosives) label on the box.

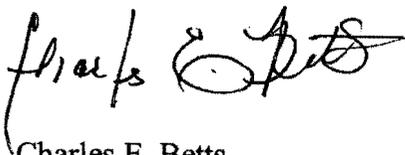
According to your letter, during an inspection, several DOT inspectors questioned whether a square-on-point (diamond) reduced size label meets the requirements of the HMR, and said that it should be rotated 90°. You believe that the rotation of the diamond shaped hazard warning label 90° would misrepresent the product to emergency responders, as the diamond shape makes it identifiable as a hazardous material package. You ship these packages internationally to other countries that do not accept a hazard warning label rotated 90° on its side. Several boxes used to transport your company's Class 1 (Explosives) products are shorter in height than the square-on-point or diamond shaped 100 mm (3.9 inches) hazard warning label. You ask whether your understanding is correct that §172.407(f) allows use of a reduced size hazard warning label that conforms to the UN Recommendations.

The labeling specifications provided in §172.407(c) of the HMR require each hazard warning label to be at least 100 mm (3.9 inches) on each side. The provisions in §172.406(b)(1) and (3) specify that a label may be printed on or placed on a securely affixed tag or may be affixed by other suitable means to: (1) a package that contains no Class 7 (Radioactive) material which has dimensions less than those of the required label; and (2) a package which has an irregular surface that a label cannot be satisfactorily affixed. The UN Recommendations (5.2.2.2.1.1) specify that a hazard warning label must be in the form of a square set at an angle of 45° (diamond-shaped) with minimum dimensions of 100 mm X 100 mm (3.9 inches), except in the case of packages of such dimensions that they can only bear small labels, as provided in 5.2.2.2.1.2.

The HMR do not prohibit the placement of a hazard warning label (e.g., Class 1 (Explosives)) in an orientation where the square-on-point is located with its flat sides parallel to the sides of the packages. That is, the label may be placed square-on-side when the square-on-point is not practicable. In accordance with §172.407(f) of the HMR, except for materials poisonous by inhalation, a label conforming to specifications in the UN Recommendations may be used in place of a corresponding label that conforms to the requirements of the HMR, which permit use of a reduced size hazard warning label when a package surface is too small or of an irregular shape for a full size label. Therefore, you may use a reduced size hazard warning label that conforms to the UN Recommendations.

I hope this information is helpful. If we can be of further assistance, please contact us.

Sincerely,

A handwritten signature in black ink, appearing to read "Charles E. Betts". The signature is written in a cursive style with a large, stylized initial "C".

Charles E. Betts  
Chief, Standards Development  
Office of Hazardous Materials Standards

cc: Bob Burns, PHH-40  
Edward Ratstetter, PHH-40  
John Henegan, PHH-40

**Drakeford, Carolyn (PHMSA)**

Engrum  
§ 172.407(f)  
Labeling  
10-0088

**From:** INFOCNTR (PHMSA)  
**Sent:** Tuesday, April 20, 2010 11:39 AM  
**To:** Drakeford, Carolyn (PHMSA)  
**Subject:** FW: Training Requirements (Sections 172.1 - 172.807)

Carolyn,  
Below is a request for a formal written letter of interpretation of the regulations Thanks,  
Rob

-----Original Message-----

**From:** mark.andersen@am.dynonobel.com [mailto:mark.andersen@am.dynonobel.com]  
**Sent:** Tuesday, April 20, 2010 10:49 AM  
**To:** PHMSA HM InfoCenter  
**Subject:** Training Requirements (Sections 172.1 - 172.807)

Dear Mr. Mazzullo,

Dyno Nobel Inc. is requesting a written interpretation of 49CFR part 172.407 paragraph f on the reduced size hazard class label, specifically for Class 1.

Several boxes used to transport our products are shorter in height than the standard required hazard class label square-on-point with 100 mm sides. Dyno Nobel interprets that 49CFR part 172.407 paragraph f allows for a reduction in size of the hazard class label that conforms to the UN Recommendations. This has been confirmed twice in verbal conversation with the US DOT Hazardous Materials Information Center. Each time the HMIC has corroborated that the hazard class label can be reduced in size if the dimensions of the box will not accommodate the standard square-on-point 100 mm sided label.

The question has been raised by several US DOT inspectors that the reduced size Class 1 hazard label doesn't meet 49 CFR requirements. The inspectors have stated that the hazard label should be rotated 90°. We feel that the rotation of the hazard class label 90° would misrepresent the product to emergency first responders, as the diamond shape makes this immediately identified as a hazardous material. Since our products are shipped throughout the world other countries don't accept the hazard class label rotated on its side.

Written clarification on what is acceptable would be greatly appreciated. Thanks in advance for your help in this matter.

Best regards,  
Mark Andersen

Dyno Nobel Inc.  
660 Hopmeadow Street, P.O. Box 2006, Simsbury, CT 06070, USA  
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email:mark.andersen@am.dynonobel.com  
<http://www.dynonobel.com>

## Groundbreaking Performance Through Practical Innovation

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## Engrum, Helen (PHMSA)

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**From:** Burns, Bob (PHMSA)  
**Sent:** Friday, May 07, 2010 1:30 PM  
**To:** Engrum, Helen (PHMSA)  
**Cc:** Rastetter, Edward (PHMSA); Heneghan, John (PHMSA)  
**Subject:** Reduced Labeling Issue  
**Attachments:** DYNO REsponse from DOT on reduced size of labeling.jpg; DSC03478.JPG; DSC03469.JPG; DSC03470.JPG; DSC03471.JPG; DSC03472.JPG; DSC03473.JPG; DSC03474.JPG; DSC03475.JPG; DSC03476.JPG; DSC03477.JPG

**Importance:** High

Helen,

Here are the photos from the package of explosives I spoke with you about on Thursday. I also attached the letter from Dyno Nobel to the company I inspected, which they forwarded on to me. As you can see, there is room on the top of the box for a normal size label. There is even room on the side of the box for a normal size label if you turned the label square instead of square-on-point. Dyno Nobel's letter states that they did not want to turn the label square because they felt it reduces the labels effectiveness to emergency responders. I am not buying into that argument as we do allow the label to be turned in cases like this and the emergency responders are not that ignorant.

Additionally, I can see maybe not wanting to apply the label to the top of the box for stacking purposes but that is no different than a company the applies their marking & labels to the top of a 55-gallon drum instead of the side, and then the drums are stacked one on top of another or in transit freight is stacked on the drum. We don't violate anybody for not labeling the drum once we find they have labeled the top or side of the drum, all we look for is to see that it is labeled and not on the bottom.

As I mentioned during our discussion, I believe caution should be exercised here in what we do as if word gets out to the industry that all you have to do is say that my package doesn't work well with DOT's labeling requirements and I can use the 172.407(f) exception for UN recommendations that allow reduced labels if my package dimensions are inadequate, we are opening up a can of worms with industry doing all sorts of things with the labels. Again, the UN recommendations do say labels of reduced size may be used if the dimensions of the package will ONLY accommodate smaller labels. In this case, the dimensions on the top of the box would accommodate normal size labels and/or, the side of this package is sufficient to fit a label of normal size if turned square.

Thanks for the dialog yesterday and I hope the attached information will assist you in your endeavors to assist industry with their concerns. If I can provide any further assistance please don't hesitate to call on me.

Regards,

Robert F. Burns  
Hazardous Materials Investigator  
U.S. Department of Transportation  
Pipeline and Hazardous Materials Safety Administration  
Office of hazardous Materials Safety

Office of Hazardous Materials Enforcement  
Southern Region/Florida Resident Investigator  
233 Peachtree Street, N.E., Suite 602 (PHH-46) Atlanta, Georgia 30303  
Office (404) 832-1140  
**Cell (386) 871-4470**  
Office Fax (404) 832-1168  
**E-fax (321) 747-0391**

**Dyno Nobel Americas**

**DYNO**  
**Dyno Nobel**

Mr. J D Mann  
Boren Explosives  
8425 Highway 269  
Parish, AL 35580  
USA

**DYNO NOBEL INC.**  
2650 Decker Lake Blvd.  
Suite 300  
Salt Lake City, Utah  
84119 USA  
Telephone: 801-364-4800  
Fax: 801-328-6452  
[www.dynonobel.com](http://www.dynonobel.com)

**Date** 20 April 2010

**Re: Exceptions to the Label Specifications in 49CFR, 172.407(f)**

Dear Mr. Mann:

Dyno Nobel has requested written interpretation of the DOT regulation (which we expect to receive in about 6 weeks) in support of our use of the reduced size hazard class label on our booster box R06690.

Due to the height of this cast booster, the box is shorter than the DOT required hazard class label size. 49CFR, part 172.407 paragraph f, allows a reduction in size of the required hazard class label that conforms to the UN recommendations.

This size reduction has been confirmed twice verbally with the US DOT Hazardous Materials Information Center and, on each occasion, the U.S. DOT confirmed that the hazard class label can be reduced in size if the dimensions of the box will not accommodate the standard square-on-point 100 mm sided label. Rotating the hazard class label 90° would misrepresent the product to emergency first responders since the diamond immediately identifies the material as hazardous.

If you have any questions or comments concerning this or any other packaging issue, please feel free to contact me.

Regards



Mark T. Andersen  
Global Packaging Engineer  
Phone: +1 860 408 1832  
e-mail: [mark.andersen@am.dynonobel.com](mailto:mark.andersen@am.dynonobel.com)

Groundbreaking Performance



DYNO Nobel  
Net Weight 11.1 kg (24.5 lb)  
Gross Weight 12.5 kg (27.6 lb)  
Net Volume 0.001 m<sup>3</sup>  
Gross Volume 0.001 m<sup>3</sup>  
EXPLOSIVE

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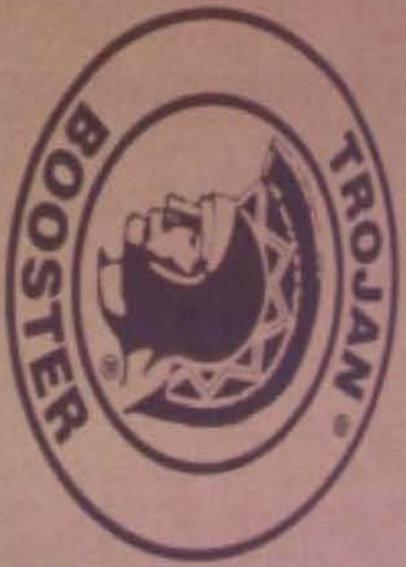
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EXPLOSIVE

BOOSTERS  
NON-ORCATEERS  
PETARD  
UN0042



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**DYNO**  
DyNO Nobel

*Groundbreaking Performance*

**DYNO**  
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SALT LAKE CITY, UTAH  
SALT LAKE 2017

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BOOSTERS  
RENFORCATEURS  
PETARDOS  
**UN0042**



BOOSTERS  
RACATEURS  
PETARD  
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