



U.S. Department  
of Transportation

**Pipeline and Hazardous  
Materials Safety  
Administration**

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

FEB 20 2013

Mr. Kevin Skerrett  
Wers Professional Services  
77 Clearbrook Drive  
Rochester, New York 14609

Ref. No. 12-0238

Dear Mr. Skerrett:

This responds to your October 22, 2012 request for clarification on § 173.150(e), on aqueous solutions of alcohol exception, in the Hazardous Materials Regulations (HMR; 49 CFR 171-180). In clarification letter Ref. No. 12-0029, PHMSA stated its' opinion that a product which contains 24% or less alcohol by volume and contains no less than 50% water, as well as less than 3% of ammonium hydroxide solution as a PH balancer was not eligible for the exception provided in § 173.150(e) because the solution contains other hazardous material (i.e. ammonium hydroxide). Specifically, you request additional clarification on this exception, especially the definition of a hazardous material as used in clarification letter Ref. No. 12-0029.

In regard to letter Ref. No. 12-0029, the incoming request indicated that the ammonium hydroxide ingredient is a Class 8 corrosive liquid. The term "hazardous material" is defined in § 171.8 as follows:

"a substance or material that the Secretary of Transportation has determined is capable of posing an unreasonable risk to health, safety, and property when transported in commerce, and has designated as hazardous under section 5103 of Federal hazardous materials transportation law (49 U.S.C. 5103). The term includes hazardous substances, hazardous wastes, marine pollutants, elevated temperature materials, materials designated as hazardous in the Hazardous Materials Table (see 49 CFR 172.101), and materials that meet the defining criteria for hazard classes and divisions in part 173 of this subchapter."

Regarding your mixture, if your material contains an ingredient, i.e., ammonium hydroxide, that meets the definition of a hazardous material as stated above, and the defining criteria for hazard classes and divisions in part 173 of the HMR, the exception in § 173.150(e) does not apply as stated in letter Ref. No. 12-0029.

Section 173.22 of the HMR states that a shipper is required to properly class and describe a hazardous material in accordance with Parts 172 and 173 of the HMR. We do not perform this function. If you can establish the PH balancer used in your solution does not meet the definition of a hazardous material then it is eligible for the exception in § 173.150(e).

I hope this answers your inquiry. If you need additional assistance, please contact this office at 202-366-8553.

Sincerely,

A handwritten signature in black ink, appearing to read "Robert Benedict". The signature is written in a cursive style with a large initial "R" and "B".

Robert Benedict  
Chief, Standards Development Branch  
Standards and Rulemaking Division

Drakeford, Carolyn (PHMSA)

Boothe  
§ 173.150(e)  
§ 171.8

**From:** INFOCNTR (PHMSA)  
**Sent:** Tuesday, October 23, 2012 10:07 AM  
**To:** Drakeford, Carolyn (PHMSA)  
**Subject:** FW: Questions about alcohol exception and interpretation 12-0029 - request for formal letter of interpretation

Exceptions  
12-0238

Hi Carolyn,  
We received the following request for a formal letter of interpretation.  
Thanks,  
Victoria

**From:** Kevin Skerrett [mailto:kevins@thewerco.com]  
**Sent:** Monday, October 22, 2012 5:02 PM  
**To:** PHMSA HM InfoCenter  
**Subject:** FW: Questions about alcohol exception and interpretation 12-0029 - request for formal letter of interpretation

It was with great interest that I read your interpretation 12-0029 - Mr. Tim Jamison's request concerning application of the alcohol exception at 49CFR 173.150(e) to a product containing 3% ammonium hydroxide in addition to aqueous alcohol.

Since I am concerned about the implications to my product review process, I would like additional clarification to the application of the definition of "hazardous material".

I find Mr. Jamison's request at

<http://www.phmsa.dot.gov/portal/site/PHMSA/menuitem.ebdc7a8a7e39f2e55cf2031050248a0c/?vgnnextoid=1d2abed7e28a6310VgnVCM1000001ecb7898RCRD>

The definition of "hazardous material" at 171.8 is:

*Hazardous material* means a substance or material that the Secretary of Transportation has determined is capable of posing an unreasonable risk to health, safety, and property when transported in commerce, and has designated as hazardous under section 5103 of Federal hazardous materials transportation law (49 U.S.C. 5103). The term includes hazardous substances, hazardous wastes, marine pollutants, elevated temperature materials, materials designated as hazardous in the Hazardous Materials Table (see 49 CFR 172.101), and materials that meet the defining criteria for hazard classes and divisions in part 173 of this subchapter.

I believe the ammonia in this product has several opportunities for the ammonia to affect this exception, but I would like to ensure I know exactly which one(s) you are applying to rule out the alcohol exception, so I can make sure my review process is complete.

To contain a "hazardous material" other than aqueous alcohol, it must contain a material meeting one of the definitions of "hazardous material" above.

1) *Hazardous substances*

a. The definition in 171.8 includes 3 parts:

- i. Ammonium hydroxide (the form ammonia takes in water) is listed on the Hazardous Substance list (49CFR 172.101 Appendix A Table 1), with an RQ of 1000 lb (454 kg).
- ii. Mr. Jamison's product, at 3% ammonium hydroxide, does exceed the 2% limit in the table in 171.8 "hazardous substance" (3)(ii). A product containing 1% would not. Would that make a difference to the alcohol exception?
- iii. If packaged so that a single package does not exceed the RQ, per 171.8 "hazardous substance" (2), the material would NOT be a "hazardous substance". Assuming Mr. Jamison's product met this, that the 3% ammonium hydroxide did not exceed 1000 lbs in a single container,

is it accurate to claim that his product does not “contain a hazardous substance” for application of the alcohol exception?

- b. All three parts are joined by “and” making them together the definition of a “hazardous substance”. Is that understanding correct for application of the alcohol exception?
- 2) *Hazardous Waste* – RCRA includes the “alcohol exception” in its definition of ignitability, but does not include reference to “other hazardous material” – so when shipped as a waste, this product would not carry D001 per 40CFR 261.21(a)(1).
- a. If any other waste code applied, when shipped as a waste, this product would be at least Class 3 – not eligible for the HMR alcohol exception because it contains a “hazardous waste”.
  - b. If no other waste code applied, when shipped as a waste, this product’s transportation classification would depend on the rest of this process, since it would not be a RCRA “hazardous waste”.
- 3) *Marine Pollutant* – ammonium hydroxide is not a DOT marine pollutant, but for the sake of a complete review process:
- a. *Marine pollutant* is defined in 49CFR 171.8 as “a material which is listed in appendix B to § 172.101 of this subchapter (also see § 171.4) and, when in a solution or mixture of one or more marine pollutants, is packaged in a concentration which equals or exceeds:
    - i. Ten percent by weight of the solution or mixture for materials listed in the appendix; or
    - ii. One percent by weight of the solution or mixture for materials that are identified as severe marine pollutants in the appendix.
  - b. 171.4 is an exception from the handling of a material as a Marine Pollutant, not the classification as a Marine Pollutant. So regardless of whether 171.4 applies, classification as a Marine Pollutant precludes allowing the alcohol exception – it remains Class 3. Is that correct?
  - c. In a mixture containing a Marine Pollutant, would the 10%/1% criteria would be considered in determining whether the alcohol exception could be applied?
- 4) *Elevated Temperature* – A material meeting either of the first two criteria in 171.8 *Elevated Temperature* is precluded from taking the alcohol exception.
- 5) *Materials designated as hazardous in the Hazardous Materials Table* (see 49 CFR 172.101):
- a. The 49CFR 172.101 table lists “ammonium hydroxide solutions” in 4 listings for “ammonia solutions”, the least concentrated being UN2672, described as “Ammonia solution, *relative density between 0.880 and 0.957 at 15 degrees C in water, with more than 10 percent but not more than 35 percent ammonia*”.
  - b. If the product does NOT exceed 10% ammonium hydroxide, can it be claimed that the product does not contain a material “designated as hazardous in the Hazardous Materials Table”, other than the aqueous alcohol?
  - c. “Anhydrous ammonia” is listed in the table, but does not exist in an aqueous solution.
- 6) *Materials that meet the defining criteria for hazard classes and divisions in part 173 of this subchapter:*
- a. If it can be established that the product does not rise to 8/III criteria as designated in 49CFR 173.137(c), by either the skin or either metal criteria, can it be claimed that the product does not contain “materials that meet the defining criteria for hazard classes and divisions in part 173 of this subchapter”, other than the aqueous alcohol?

Please identify which (one or more) of the above criteria Mr. Jamison’s product fails for the alcohol exception, so I can ensure my review process correctly manages the difference between the alcohol exception and the definitions supplied in the HMR.

If, in the case of item 5, the determination depends on the concentration of the material added in creating the product, please indicate that. This would be a very difficult aspect for me to determine in my review process, since I have available the product formulation (as shipped), physical property data, and some additional product information, but I do not have the method by which the product is formulated. There is no way I could tell if concentrated ammonia was added to a dilute alcohol solution, or if concentrated alcohol was added to a dilute ammonia solution – the properties of the material as shipped in transport would be the same in both cases. I would need access to information that would be extremely difficult to obtain for a reshipment or reverse logistics compliance application.

I realize this is complicated, but since compliance is involved, I would appreciate a response as soon as possible, so I can adjust my process if necessary.

Thank you for your consideration of this issue.



**Kevin Skerrett, Senior Regulatory Specialist**

WPS

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