



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

1200 New Jersey Avenue, SE  
Washington, DC 20590

September 23, 2021

Mr. AJ Kenny  
Director of Regulations  
Smarter Sorting  
4901 East Cesar Chavez Street  
Austin, TX 78702

Reference No. 21-0065

Dear Mr. Kenny:

This letter is in response to your June 15, 2021, letter requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to exceptions for aqueous solutions of alcohol. Specifically, you ask whether the condition of 24 percent or less alcohol by volume in the § 173.150(e)(1) exception applies to all alcohols in the aqueous solution or just to the flammable alcohol(s) in the aqueous solution. Furthermore, you provide the following example of an aqueous solution and ask whether the solution is eligible for the § 173.150(e)(1) exception:

- Aqueous solution has a flashpoint of 54 °C and meets the definition of a flammable liquid (Class 3) (as specified in § 173.120(a));
- 20 percent of the solution is isopropanol, which is an alcohol and has a flashpoint of 12 °C (i.e., a flammable alcohol);
- 20 percent of the solution is glycerol, which is an alcohol and has a flashpoint of 175 °C (i.e., a non-flammable alcohol); and
- The remaining components in the solution do not meet the definition of a hazardous material.

The 24 percent or less alcohol by volume condition in the § 173.150(e)(1) exception applies to flammable alcohols. Thus, the example of the aqueous solution you outlined above would be eligible for the exception in § 173.150(e)(1). As detailed in § 173.150(e)(1), “an aqueous solution containing 24 percent or less alcohol by volume and no other hazardous materials may be reclassified as a combustible liquid.” The original intent of this exception was to provide relief for aqueous solution of alcohols that do not meet the definition of a hazard class other than a flammable liquid (Class 3).

Therefore, while the solution itself contains 40 percent alcohol, the criteria for the § 173.150(e)(1) exception should be based on the alcohol(s) that meets the definition of a flammable liquid (Class 3).

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". The signature is fluid and cursive, with a large initial "D".

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

Geller

21-0065

**From:** [INFOCNTR \(PHMSA\)](#)  
**To:** [Dodd, Alice \(PHMSA\)](#); [Hazmat Interps](#)  
**Subject:** FW: Request for letter of interpretation - Smarter Sorting  
**Date:** Wednesday, June 16, 2021 12:06:40 PM  
**Attachments:** [PHMSA request for letter of interpretation - Smarter Sorting 06152021.pdf](#)

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Good afternoon Alice,

Please see the attached request for a letter of interpretation. The address and phone number for the requestor is listed below.

Please contact our office with any questions.

Thank you,

Sarah (HMIC)

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**From:** AJ Kenny <[aj@smartersorting.com](mailto:aj@smartersorting.com)>  
**Sent:** Wednesday, June 16, 2021 11:55 AM  
**To:** INFOCNTR (PHMSA) <[INFOCNTR.INFOCNTR@dot.gov](mailto:INFOCNTR.INFOCNTR@dot.gov)>  
**Subject:** Re: Request for letter of interpretation - Smarter Sorting

**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.

Hi Sarah,

Here are the details you requested:

- Full Name: AJ Kenny
- Physical Mailing Address: 4901 East Cesar Chavez Street, Austin, TX 78702
- Telephone Number: 206-909-2689

AJ

On Wed, Jun 16, 2021 at 10:15 AM INFOCNTR (PHMSA) <[INFOCNTR.INFOCNTR@dot.gov](mailto:INFOCNTR.INFOCNTR@dot.gov)> wrote:

Dear AJ,

We have received your request for a written letter of interpretation regarding the hazardous materials regulations (49 CFR Parts 171-180). The hazardous materials regulations are available at the following URL:

[https://www.ecfr.gov/cgi-bin/text-idx?SID=1d49a3b137cb1b6fc45251074e634b44&tpl=/ecfrbrowse/Title49/49tab\\_02.tpl](https://www.ecfr.gov/cgi-bin/text-idx?SID=1d49a3b137cb1b6fc45251074e634b44&tpl=/ecfrbrowse/Title49/49tab_02.tpl)

However, before we can submit your request for processing, please respond to this email with:

- Full Name
- Physical Mailing Address
- Telephone Number

Sincerely,

Sarah, Hazardous Materials Specialist

An e-mail response from this office is considered informal guidance. Formal guidance may be requested in accordance with 49 CFR 105.20. <https://www.phmsa.dot.gov/standards-rulemaking/hazmat/hazardous-materials-information-center>

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**From:** AJ Kenny <[aj@smartersorting.com](mailto:aj@smartersorting.com)>  
**Sent:** Tuesday, June 15, 2021 11:10 PM  
**To:** Kelley, Shane (PHMSA) <[shane.kelley@dot.gov](mailto:shane.kelley@dot.gov)>  
**Cc:** INFOCNTR (PHMSA) <[INFOCNTR.INFOCNTR@dot.gov](mailto:INFOCNTR.INFOCNTR@dot.gov)>; Charlie Vallely <[charlie@smartersorting.com](mailto:charlie@smartersorting.com)>  
**Subject:** Request for letter of interpretation - Smarter Sorting

**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.

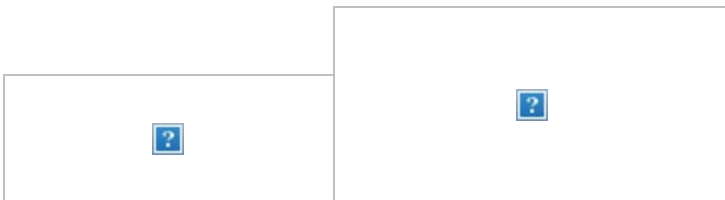
Hi Shane,

On June 10th and 11th I spoke with staff from the PHMSA HM Information Center regarding an exception for aqueous solutions of alcohol. Based on feedback from those calls, I am seeking a formal interpretation (see PDF attached). Please let me know if you have any questions about the request.

Best regards,

AJ

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Connect with us here: [LinkedIn](#), [Facebook](#), [Instagram](#), [Twitter](#), [BuiltInAustin](#)





4901 E. Cesar Chavez  
| Austin, TX 78702

June 15, 2021

**VIA E-MAIL** ([shane.kelley@dot.gov](mailto:shane.kelley@dot.gov))

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  
cc: [infocntr@dot.gov](mailto:infocntr@dot.gov)

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Dear Mr. Kelley, Smarter Sorting would like to request a formal letter of interpretation regarding the regulatory exception in §173.150(e)(1). Specifically, is the intent of the exception to include all alcohols in the 24% threshold, or is the intent to only include *flammable* alcohols in the 24% threshold?

In a letter of interpretation from 2013 (13-0130), PHMSA stated that there is no regulatory definition of alcohol, however, *“it is the understanding of this Office that this term is generally defined in chemical dictionaries and texts to mean any organic compound that has a hydroxyl group (-OH) bound to a carbon atom, which in turn is bound to other hydrogen and/or carbon atoms.”*

Although a strict reading of the chemical definition and this regulatory exception suggests all alcohols must be included in the 24% threshold, it seems plausible that the intent is to consider only *flammable* alcohols since they fall within the definition of a hazardous material.

Consider the following example product that makes the point.

- Product is a solution with a flashpoint of 54 °C and thus is flammable (i.e., Class 3)
  - 20% of the product is isopropanol. Isopropanol meets the definition of alcohol per the above mentioned letter of interpretation (2013 (13-0130)) and has a flashpoint of ~12 °C (below the 60 °C cutoff for “flammability”)
  - 20% of the product is glycerol. Glycerol is also an alcohol per the definition but has a flashpoint of ~175° C and thus this ingredient would NOT be considered flammable
- None of the other ingredients in the solution would be considered a hazardous material (i.e., none of the ingredients are Marine Pollutants or otherwise regulated for transport)

For reasons of the §173.150(e)(1) exception, does this product contain 20% alcohols or 40% alcohols? Should glycerol and other “non-flammable alcohols” be counted toward the 24% cutoff?

Perhaps a better question: does this example product meet the requirements for §173.150(e)(1)?



4901 E. Cesar Chavez  
| Austin, TX 78702

**49 CFR §173.150(e)(1)**

*(e) Aqueous solutions of alcohol.* An aqueous solution containing 24 percent or less alcohol by volume and no other hazardous material—

(1) May be reclassified as a combustible liquid.

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Respectfully submitted,

A handwritten signature in black ink, enclosed within an oval border. The signature is cursive and appears to read 'AJ Kenny'.

AJ Kenny  
Director of Regulations  
Smarter Sorting