

**From:** [INFOCNTR \(PHMSA\)](#)  
**To:** [Baker, Yul \(PHMSA\)](#)  
**Cc:** [Hazmat Interps](#)  
**Subject:** FW: Letter of Interpretation Request  
**Date:** Monday, December 1, 2025 11:46:34

---

Good morning,

Please see the letter of interpretation request below. Let us know if you need anything else.

Best,

Aminah

---

**From:** Peter Apostoluk <[peter.apostoluk@milliporesigma.com](mailto:peter.apostoluk@milliporesigma.com)>  
**Sent:** Sunday, November 30, 2025 5:46 PM  
**To:** INFOCNTR (PHMSA) <[INFOCNTR.INFOCNTR@dot.gov](mailto:INFOCNTR.INFOCNTR@dot.gov)>  
**Cc:** Check the Box (PHMSA-USDOT) <[checkthebox@dot.gov](mailto:checkthebox@dot.gov)>  
**Subject:** Letter of Interpretation Request

Some people who received this message don't often get email from [peter.apostoluk@milliporesigma.com](mailto:peter.apostoluk@milliporesigma.com). [Learn why this is important](#)

**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.

The purpose of this request is to clarify the responsibilities of a shipper and carrier of liquid hazardous materials in a non-bulk combination package with respect to compliance with upright orientation arrows. The requirements for upright orientation markings on combination packaging of liquid hazardous materials are provided in § 172.312(a), with specific packaging applications noted in § 172.312(c) where requirements of § 172.312(a) do not apply.

In OHMS letter of interpretation #03-0238 regulatory guidance was provided on the purpose of upright orientation arrows, specifically noting that “the arrows are a communication requirement that tells the handler of the package the correct orientation for transportation”. This letter of interpretation also confirmed that orientation arrows “can be used in any manner of shipments of solids and non-hazardous materials”. Upright orientation arrows are prevalent today on single parcel shipments in Business to Business (B2B) and Business to Consumer (B2C) delivery services.

Thank you for your guidance on the responsibilities for handling a combination package in an upright orientation as a single parcel through the chain of custody. The importance of handling single parcels of regulated hazardous materials in their correct orientation may be an appropriate new topic to include in a public safety outreach campaign. Such an effort may promote best practices with combination packages as single parcels, and stimulate new and innovative approaches in

combination packaging design, upright orientation indicators, and use of enhanced visuals.

I appreciate clarity on the regulatory requirement for orientation arrows on combination packaging in the HMR and the opportunity for industry and community engagement on the public safety benefits of upright orientation arrows on combination packaging.

Best regards,

Peter Apostoluk

Head of Packaging Engineering US (MKE and NOR)  
Life Science | ISCO | LS-SC-MK2 and MK3

### **MilliporeSigma**

MilliporeSigma is a subsidiary of Merck KGaA, Darmstadt, Germany

Aldrich Chemical LLC | 6000 N Teutonia Ave | Milwaukee, WI 53209 | USA  
Phone: +1 414-553-1012 | E-mail: [peter.apostoluk@milliporesigma.com](mailto:peter.apostoluk@milliporesigma.com)  
<http://www.emdmillipore.com>

Mandatory information can be found at <http://mandatories.merckgroup.com>

This message and any attachment are confidential and may be privileged or otherwise protected from disclosure. If you are not the intended recipient, you must not copy this message or attachment or disclose the contents to any other person. If you have received this transmission in error, please notify the sender immediately and delete the message and any attachment from your system. Merck KGaA, Darmstadt, Germany and any of its subsidiaries do not accept liability for any omissions or errors in this message which may arise as a result of E-Mail-transmission or for damages resulting from any unauthorized changes of the content of this message and any attachment thereto. Merck KGaA, Darmstadt, Germany and any of its subsidiaries do not guarantee that this message is free of viruses and does not accept liability for any damages caused by any virus transmitted therewith.

Click [emdgroup.com/disclaimer](http://emdgroup.com/disclaimer) to access the German, French, Spanish, Portuguese, Turkish, Polish and Slovak versions of this disclaimer.

Please find our Privacy Statement information by clicking here: [emdgroup.com/privacy-statement](http://emdgroup.com/privacy-statement) (U.S.) or [emdserono.com/privacy-statement](http://emdserono.com/privacy-statement) (Canada)