



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue, SE
Washington, DC 20590

OCT 11 2018

Carolyn Geile
Corp EHS, Manager Safe Logistics
Corp Safe Logistics
MilliporeSigma
2838 Olive Street
Saint Louis, MO 63103

Reference No. 18-0085

Dear Ms. Geile:

This letter is in response to your May 31, 2018, letter requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to overpacks shipped internationally by air. Specifically, you ask if the total quantity per overpack must be provided on the shipping paper when the overpack consists of only one UN identification number in accordance with international standards.

The HMR do not require that the total quantity per overpack be indicated on the shipping paper. While § 172.202(a)(7) of the HMR requires that the number and type of packages be indicated on the shipping paper, this section only addresses individual packages and does not apply to overpacks. However, a shipper may include information regarding the use of an overpack on the shipping paper as additional information.

Similarly, the International Civil Aviation Organization's (ICAO) Technical Instructions for the Safe Transport of Dangerous Goods by Air require that the use of an overpack be indicated on the shipping paper, but do not specifically require a total quantity per overpack; see ICAO Technical Instructions Part 5; Chapter 4, Section 1.5.8. Note that while the HMR do not officially recognize the International Air Transport Association (IATA) Dangerous Good Regulations for purposes of transporting hazardous materials, IATA may be more prescriptive than ICAO in regard to these requirements. We encourage you to contact IATA for further clarification at: <https://www.iata.org/whatwedo/cargo/pages/contactus.aspx>.

I hope this information is helpful. Please contact us if we can be of further assistance.

Sincerely,

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

Casey
IATA
18-0085

January, Ikeya CTR (PHMSA)

From: INFOCNTR (PHMSA)
Sent: Tuesday, June 05, 2018 3:40 PM
To: Hazmat Interps
Subject: FW: Request for expedited Letter of Interpretation (IATA)
Attachments: PHMSA REQUEST for interpretation_IATA Section 8.1.6.9.2.pdf.docx

Hello Alice and Ikeya,

I have spoken with Ms. Geile on the phone and she was able to provide me an ICAO citation in the event the International Standards Team couldn't use the IATA citation she provided. The ICAO citation is: ICAO Pt. 5 Chapter 4.1.5.8.

Regards,

-Breanna

From: Carolyn Geile [mailto:carolyn.geile@sial.com]
Sent: Tuesday, June 05, 2018 10:54 AM
To: INFOCNTR (PHMSA) <INFOCNTR.INFOCNTR@dot.gov>
Subject: Request for expedited Letter of Interpretation (IATA)

Office of Hazard Materials Standards,
Our company needs to request an expedited Letter of Interpretation on the IATA regulations as it pertains to documentation and the use of overpacks; i.e. "total quantity per overpack". Our international freight that is packaged on refrigerant is being rejected daily to due to the freight forwards recent interpretation of of IATA 8.1.6.9.2 Step 7.

Your assistance is greatly appreciated.

Best regards,
Carolyn

Carolyn Geile, CDGP
Manager, Corp Safe Logistics
Corporate Environmental, Health & Safety

MilliporeSigma

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PIPELINE AND HAZARDOUS MATERIALS
SAFETY ADMINISTRATION
U.S. Department of Transportation
Attn: PHH-13
1200 New Jersey Avenue, SE
Washington, DC 20590

May 31, 2018

International Standards
To whom it may concern,

In support of MilliporeSigma Life Science business, Sigma-Aldrich Intl GmbH (c/o Sigma-Aldrich Manufacturing LLC) which packs and prepares international air (IATA) shipping paperwork, I would like to seek clarification on the proper application of 'total quantities per overpack'.

Sigma-Aldrich offers for international transport a large amount of dangerous goods substances used in Life Science research that requires the use of wet ice or dry ice as refrigerants. Compatible, temperature specific goods are packaged according to UN POP Specification Packaging (applicable packing instructions), and when required, triple packed with leakproof liners prior to properly closing the UN packaging as per the manufactures written instructions. All marks and labels are applied to those materials classified as dangerous goods before the completed package(s) are overpacked using the correct refrigerant.

When dry ice is used, the outside packaging allows for the release of carbon dioxide gas and otherwise meets the provisions stated in §173.217. The primary and secondary packagings maintain their integrity at the temperature of the refrigerant used, as well as the pressures of the transport. All dry ice overpacks are labeled as class 9 and marked as "Carbon Dioxide, Solid" along with the total weight of dry ice in kilograms. If substance(s) are classified as UN3373, the overpack is also marked with the indication that the material is being refrigerated for diagnostic purposes as per §173.199(d)(2).

When a consignment consists of an overpack, the IATA DGR Section 8.1.6.9.2 Step 7 indicates that the phrase "overpack used" must be inserted immediately after the relevant entries contained in the overpack and must be listed first using a unique identification mark. This is being performed.

The questions I have pertain to when there are multiple overpack boxes per consignment and the dangerous good(s) that are contained per overpack are limited to one UN Number, which may or may not be packed on a refrigerant.

- Is the first bullet point of 8.1.6.9.2 Step 7, applicable to every overpack and must all entries now have a total quantity per overpack just because there is more than one overpack in the consignment?
It states "... and include the total quantity of dangerous goods within each overpack including the unit of measurement and where applicable, the letter "G".

Markings Section 7.1.7.3 reads when a consignment consists of more than one overpack each overpack must show an identification mark and the total quantity of dangerous goods, as indicated on the Shipper's Declaration.

The "Notes" of 8.1.6.9.2 Step 7, and 7.1.7.3 indicate "where an overpack contains more than one UN Number, the total quantity of dangerous goods should be shown by UN Number". I understand this to mean that when I have multiple UN Numbers in an overpack, or multiple boxes that contain only one UN Number in an overpack, the "total quantity per overpack" must be provided. It is provided in the proper unit of measure, on both the Shipper's declaration and the marking of the overpack, and it is listed first on the Shipper's Declaration using a unique identification number.

When there is only one UN Number per overpack, there are no quantities to total. I am being asked to do this, which I believe is redundant information and provides no safety value. I am also being asked to include the total quantity for the dry ice when it is the refrigerant in the overpack for the one UN Number. The marking requirements of IATA 7.1.7.1 have been met.

I have included examples of I interpret IATA 8.1.6.9.2 Step 7, and also examples of what I am being asked to provide.

Sigma-Aldrich is seeking confirmation from the Office of Hazardous Materials International Standards on the appropriate application of "total quantity per overpack" as required by IATA Section 8.1.6.9.2 Step 7.

Best Regards,

Carolyn Geile, CDGP
Corp EHS, Manager Safe Logistics
MilliporeSigma
2838 Olive Street
St. Louis, MO 63103

SHIPPER'S DECLARATION FOR DANGEROUS GOODS

| | |
|-------------------------------|---|
| Shipper Address of shipper | Air Waybill No. Page 1 of 1 Pages Shipper's Reference Number <i>(optional)</i> |
|-------------------------------|---|

| | |
|-----------------------------------|---|
| Consignee Address of consignee | For optional use for Company logo name and address |
|-----------------------------------|---|

Two completed and signed copies of this Declaration must be handed to the operator.

WARNING

| | | | |
|---|---|---|---|
| TRANSPORT DETAILS This shipment is within the limitations prescribed for. <i>(delete non-applicable)</i> | | Airport of Departure: CHICAGO IL | Failure to comply in all respects with the applicable Dangerous Goods Regulations may be in breach of the applicable law, subject to legal penalties. |
| <input type="checkbox"/> PASSENGER AND CARGO AIRCRAFT | <input checked="" type="checkbox"/> DANGEROUS GOODS AIRCRAFT ONLY | Airport of Destination: BANGALORE | |
| Shipment type: <i>(delete non-applicable)</i> <input checked="" type="checkbox"/> NON-RADIOACTIVE <input type="checkbox"/> RADIOACTIVE | | | |

| NATURE AND QUANTITY OF DANGEROUS GOODS | | | | | | |
|--|---|-------------------------------------|---------------|---|--------------|---------------|
| Dangerous Goods Identification | | | | | | |
| UN or ID No. | Proper Shipping Name | Class or Division (Subsidiary Risk) | Packing Group | Quantity and type of packing | Packing Inst | Authorization |
| UN3264 | CORROSIVE LIQUID, ACIDIC INORGANIC, N.O.S. (CONTAINS SULFURIC ACID) | 8 | III | 01 FIBREBOARD BOX X 72.000 ml OVERPACK USED NO. 968 | 852 | |
| UN2811 | TOXIC SOLID, ORGANIC, N.O.S. (TACALCITOL) | 6.1 | I | 01 FIBREBOARD BOX X .001 g OVERPACK USED NO 969 | 666 | |
| UN1230 | METHANOL | 3 (6.1) | II | 01 FIBREBOARD BOX X 1.000 ml | 352 | |
| UN1845 | CARBON DIOXIDE, SOLID | 9 | | 15.436 kg OVERPACK USED NO. 970 | 954 | |

Additional Handling Information

Emergency contact 24 Hour Number-CHEMTREC: acct no. 20223
 +1 703 527-3887 or 011 703 527-3887

| | |
|---|--|
| I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labelled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. I declare that all of the applicable air transport requirements have been met. | Name/Title of Signatory name and title Place and Date St. Louis MO 5/30/2019 Signature <i>(see warning above)</i> |
|---|--|

Being requested to provide

SHIPPER'S DECLARATION FOR DANGEROUS GOODS

| | |
|-------------------------------|---|
| Shipper Address of shipper | Air Waybill No. Page 1 of 1 Pages Shipper's Reference Number <i>(optional)</i> |
|-------------------------------|---|

| | |
|-----------------------------------|---|
| Consignee Address of consignee | For optional use for Company logo name and address |
|-----------------------------------|---|

Two completed and signed copies of this Declaration must be handed to the operator.

| | | | |
|---|---|---|---|
| TRANSPORT DETAILS This shipment is within the limitations prescribed for: <i>(delete non-applicable)</i> | | Airport of Departure: CHICAGO IL | WARNING Failure to comply in all respects with the applicable Dangerous Goods Regulations may be in breach of the applicable law, subject to legal penalties. |
| <input type="checkbox"/> PASSENGER AND CARGO AIRCRAFT | <input checked="" type="checkbox"/> CARGO AIRCRAFT ONLY | Airport of Destination: BANGALORE | |
| Shipment type: <i>(delete non-applicable)</i> <input checked="" type="checkbox"/> NON-FLAMMABLE <input type="checkbox"/> FLAMMABLE | | | |

| NATURE AND QUANTITY OF DANGEROUS GOODS | | | | | | |
|--|---|---------------------------------------|---------------|---|--------------|---------------|
| Dangerous Goods Identification | | | | | | |
| UN or ID No | Proper Shipping Name | Class (or Division) (Subsidiary Risk) | Packing Group | Quantity and type of packing | Packing Inst | Authorization |
| UN3264 | CORROSIVE LIQUID, ACIDIC INORGANIC, N.O.S. (CONTAINS SULFURIC ACID) | 8 | III | 01 FIBREBOARD BOX X 72.000 ml OVERPACK USED NO. 988 TOTAL QUANTITY PER OVERPACK 72.000 ml | 852 | |
| UN1230 | METHANOL | 3 (6.1) | II | 01 FIBREBOARD BOX X 1.000 ml | 352 | |
| UN1845 | CARBON DIOXIDE, SOLID | 9 | | 15.436 kg OVERPACK USED NO. 970 TOTAL QUANTITY PER OVERPACK 1.000 ml, 15.436 kg | 954 | |

Additional Handling Information

Emergency contact: 24 Hour Number-CHEMTREC: acct no. 20223
 +1 703 527-3887 or 011 703 527-3887

| | |
|---|---|
| I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labelled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. I declare that all of the applicable air transport requirements have been met. | Name/Title of Signatory (name and title) |
| | Place and Date St. Louis MO 5/30/2019 |
| | Signature (not writing above) |