



U.S. Department  
of Transportation

**Pipeline and Hazardous  
Materials Safety  
Administration**

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

OCT 13 2016

Mr. Mark Smith  
Hazardous Materials Instructor  
Northern Air Cargo  
3900 Old International Airport Rd.  
Anchorage, AK 99502

Reference No. 15-0044

Dear Mr. Smith:

This responds to your December 22, 2014 letter requesting clarification on transporting aerosols under the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) and the International Civil Aviation Organization's Technical Instructions for the Safe Transport of Dangerous Goods by Air (ICAO TI). We apologize for the delay in responding and any inconvenience this may have caused. You note that the ICAO TI dangerous goods list shows seventeen UN1950 "Aerosols" entries with varying primary and subsidiary hazards, while the HMR hazardous materials table (HMT) only lists five "Aerosols" entries. You further note that no person may offer for transportation or transport a hazardous material that is a forbidden material or package that meets one of the provisions in § 171.22(e). In your request you provide an example of a product that is described under the ICAO TI as "Aerosols, flammable 2.1 (6.1) PG III", and noting that this is not an entry in the HMT, ask how an air carrier can ensure the material is not forbidden for transport as required by § 171.22(e) if the material is not listed in the HMT?

Section 173.115(l)(6) prohibits the transportation of substances of Division 6.1, PG I or II, and substances of Class 8, PG I in an aerosol container. This prohibition is in line with the Dangerous Goods List (DGL) entries for similar aerosols in the ICAO TI. Section 173.115(l)(5) requires that when the aerosol contents are classified as Division 6.1, PG III or Class 8, PG II or III, the aerosol must be assigned a subsidiary hazard of Division 6.1 or Class 8, as appropriate. The transport conditions and quantity authorizations for the HMT entry "UN 1950 Aerosols, flammable" align with the DGL entry "UN 1950 Aerosols, flammable 2.1 (6.1) PG III." In this specific case, in order to verify that the shipment is not forbidden one should consult the appropriate HMT entry for the primary hazard (UN 1950 Aerosols, Flammable).

I trust this information is helpful. If you have further questions, please do not hesitate to contact this office.

Sincerely,

Duane A. Pfund  
International Standards Coordinator  
Standards and Rulemaking Division



Webb  
§171.22(e)  
Forbidden Materials  
15-0044 05 March 2015

U.S. Department of Transportation  
PHMSA Office of Hazardous Materials Standards  
Attn: PHH-10  
East Building  
1200 New Jersey Avenue, SE  
Washington, D.C. 20590-0001

RE: Seeking clarification to a discrepancy

A discrepancy exists between 49CFR (HMR) and the ICAO Technical Instructions for the Safe Transport of Dangerous Goods by Air (ICAO TI).

As per §171.22 (e) *Forbidden materials*. No person may offer for transportation or transport a hazardous material that is a forbidden material or package as designated in—

- (1) Section 173.21 of this subchapter;
- (2) Column (3) of the §172.101 Table of this subchapter;
- (3) Column (9A) of the §172.101 Table of this subchapter when offered for transportation or transported on passenger aircraft or passenger railcar; or
- (4) Column (9B) of the §172.101 Table of this subchapter when offered for transportation or transported by cargo aircraft.

Listed in the dangerous goods list, Table 3-1, of the ICAO TI, there are 17 entries for the UN number of "UN1950" and the proper shipping name of "Aerosols" listed below in brevity.

- UN1950 Aerosols, 2.1
- UN1950 Aerosols, 2.1 (6.1) PG II
- UN1950 Aerosols, 2.1 (6.1) PG III (8) PG III
- UN1950 Aerosols, 2.3 (2.1)
- UN1950 Aerosols, 2.1 (8) PG II
- UN1950 Aerosols, 2.1 (8) PG III
- UN1950 Aerosols, 2.1 (*engine starting fluid*)
- UN1950 Aerosols, 2.1 (6.1) PG III
- UN1950 Aerosols, 2.2
- UN1950 Aerosols, 2.2 (8) PG II
- UN1950 Aerosols, 2.2 (6.1) PG III (8) PG III
- UN1950 Aerosols, 2.2 (6.1) PG II (*other than tear gas devices*)
- UN1950 Aerosols, 2.3
- UN1950 Aerosols, 2.2 (8) PG III
- UN1950 Aerosols, 2.2 (6.1) (*tear gas devices*)
- UN1950 Aerosols, 2.2 (6.1) PG III
- UN1950 Aerosols, 2.2 (5.1)

Within the HMR, we have listed only 5 entries for "UN1950" and "Aerosols".

Aerosols, corrosive, Packing Group II or III, (each not exceeding 1 L capacity).	2.2	UN1950	2.2, 8	A34	306	None	None	75 kg	150 kg
Aerosols, flammable, (each not exceeding 1 L capacity)	2.1	UN1950	2.1	N82	306	None	None	75 kg	150 kg
Aerosols, flammable, n.o.s. (engine starting fluid) (each not exceeding 1 L capacity)	2.1	UN1950	2.1	N82	306	304	None	Forbidden	150 kg
Aerosols, non-flammable, (each not exceeding 1 L capacity)	2.2	UN1950	2.2		306	None	None	75 kg	150 kg
Aerosols, poison, Packing Group III (each not exceeding 1 L capacity)	2.2	UN1950	2.2, 6.1		306	None	None	Forbidden	Forbidden

Below is an example of an SDS (MSDS) that has ICAO entries used for domestic DOT transport, but does not exist within the HMR.

<http://www.crcindustries.com/faxdocs/msds/3058.pdf>

<b>14. Transport information</b>	
<b>DOT</b>	
UN number	UN1950
UN proper shipping name	Aerosols, flammable, Limited Quantity, MARINE POLLUTANT
Transport hazard class(es)	
Class	2.1
Subsidiary risk	6.1(PGIII)
Label(s)	2.1
Packing group	Not applicable.
Environmental hazards	
Marine pollutant	Yes
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	N82
Packaging exceptions	306
Packaging non bulk	None
Packaging bulk	None
<b>IATA</b>	
UN number	UN1950
UN proper shipping name	Aerosols, flammable, containing substances in Division 6.1, Packing Group III
Transport hazard class(es)	
Class	2.1
Subsidiary risk	6.1(PGIII)
Packing group	Not applicable.
Environmental hazards	No.
ERG Code	10P
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed.
Cargo aircraft only	Allowed.

With this ICAO TI entry discrepancy, we would be unable to comply with §171.22(e) of the HMR as it cannot be verified it is in compliance.

Would it be the case that 171.22(e) would not apply in this example? In the example above, the entry UN1950, Aerosols, 2.1(6.1) is not present and therefore not shown as Forbidden in the HMT. Would it then be the case that 171.22(d) would apply as its regulated by the ICAO TI and packaging instruction PI203 would be used for domestic compliance?

We are seeking clarification to this HMR / ICAO TI discrepancy and any assistance in this matter is greatly appreciated

If you have any questions, please do not hesitate to contact me directly.

Sincerely,

A handwritten signature in black ink, appearing to read 'Mark Smith', with a stylized flourish at the end.

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