



Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals

Sub-Committee of Experts on the Transport of Dangerous Goods

Sixty-fourth session

Geneva, 24 June - 3 July 2024

Item 3 of the provisional agenda

Listing, classification and packing

Magnetic resonance imaging scanners

Transmitted by the expert from the Netherlands*

I. Introduction

1. At the sixty-third session of the Sub-Committee, proposals were discussed for transport of a new type of magnetic resonance imaging (MRI) scanner (informal document INF.25, submitted by the Netherlands) and transport of heat pumps (document ST/SG/AC.10/C.3/2023/38, submitted by Germany). Because of similarities between the two cases, it was agreed that Germany and the Netherlands would jointly explore options to draft new proposals for transport of MRI scanners and heat pumps.

2. Experts from Germany and the Netherlands exchanged views on these subjects during an online meeting in March 2024. The option of drafting a joint proposal for heat pumps and MRI scanners was considered and discussed. It was concluded that drafting separate proposals (one for heat pumps and one for MRI scanners) would be more appropriate, for a number of reasons described hereafter.

3. As explained in document ST/SG/AC.10/C.3/2023/38, heat pumps are intended for external heating and are comparable to refrigerating machines in terms of hazards during transport. An MRI scanner is not a refrigerating machine intended for external cooling, but contains a cooling mechanism for the scanner itself. Further, the experts from Germany and the Netherlands considered the option to transport both heat pumps containing non-flammable gas and MRI scanners under UN 3538 ARTICLES CONTAINING NON-FLAMMABLE, NON TOXIC GAS, N.O.S., and heat pumps containing flammable gas under UN 3358 REFRIGERATING MACHINES containing flammable, non-toxic, liquefied gas. For this option, one type of heat pump would thus be transported under an N.O.S. entry, and the other one under a specific entry, which was deemed inconsistent and therefore undesirable. Thus it was decided to consider heat pumps and MRI scanners separately and to transmit two separate proposals.

4. This document describes a new proposal for transport of MRI scanners. A separate document (ST/SG/AC.10/C.3/2024/27) transmitted by the expert from Germany describes the proposal for transport of heat pumps.

* A/78/6 (Sect. 20), table 20.5.



5. As described in detail in informal document INF.25 (sixty-third session), the proposal concerns a new type of MRI scanner containing a maximum of 1.5 kg of compressed helium. The MRI scanner is to be transported under UN 3538 ARTICLES CONTAINING NON-FLAMMABLE, NON TOXIC GAS, N.O.S.

6. In option 2 of informal document INF.25 it is proposed to assign a new special provision specific for these MRI scanners to UN 3538 ARTICLES CONTAINING NON-FLAMMABLE, NON TOXIC GAS, N.O.S. During the discussion at the sixty-third session, there was some support for this proposal, but with a preference to set the maximum quantity of gas to 12 kg and not to 1.5 kg, in line with the quantity for refrigerating machines in special provision 119. This approach is reflected in the new proposal below.

II. Proposal

7. In 3.3 assign a new special provision to UN 3538 ARTICLES CONTAINING NON-FLAMMABLE, NON TOXIC GAS, N.O.S., as follows (new text is underlined):

“4XX Articles transported under this entry include magnetic resonance imaging (MRI) scanners containing non-flammable, non-toxic gases. The non-flammable, non-toxic gas shall be contained within MRI scanner components. The MRI scanners shall be designed and constructed to contain the gas and preclude the risk of bursting or cracking of the gas retaining components during normal conditions of transport. MRI scanners are not subject to these Regulations if they contain less than 12 kg of gas in Division 2.2.”

8. Add MRI scanners to the alphabetical index of substances and articles, as follows (new text is underlined):

Name and description	Class	UN No.
<u>Magnetic resonance imaging (MRI) scanners containing non-flammable, non-toxic gases, see</u>	<u>2.2</u>	<u>3538</u>

III. Sustainable Development Goals

9. This proposal aims to ensure safe and timely transport of MRI scanners for healthcare professionals around the world. By doing so the Sub-Committee contributes to the implementation of Sustainable Development Goal 3 “Ensure healthy lives and promote well-being for all at all ages” and more specifically to target 3.8 “achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all”.
