

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 Globally Harmonized
System of Classification and Labelling of Chemicals

17 June 2022

Forty-second session

Geneva, 6-8 July 2022

Item 2 (i) of the provisional agenda

Work on the Globally Harmonized System of Classification and Labelling of Chemicals: Other matters

Classification and hazard communication of hydrofluorocarbons addressed in Annex F of the Montreal Protocol

Note by the secretariat

1. The Sub-Committee adopted in 2008 a new hazard class addressing substances hazardous to the ozone layer. This hazard class was introduced in Chapter 4.2 and appeared for the first time in the third revised edition of the GHS.
2. As currently written, the criteria in the GHS cover “*any of the controlled substances listed in annexes to the Montreal Protocol; or any mixture containing at least one ingredient listed in the annexes to the Montreal Protocol, at a concentration $\geq 0.1\%$* ”.
3. For the purposes of the GHS, the Montreal Protocol is defined as “*the Montreal Protocol on Substances that Deplete the Ozone Layer as either adjusted and/or amended by the Parties to the Protocol.*”.
4. The Montreal Protocol has been amended or adjusted several times since its creation. The London, Copenhagen, Montreal and Beijing amendments (adopted in 1990, 1992, 1997 and 1999 respectively) addressed provisions relating to ozone depleting substances listed in annexes A, B, C, D or E of the Protocol.
5. The most recent amendment was adopted in October 2016, at the twenty-eighth meeting of the Conference of the Parties, following decision XXVIII/1. This amendment is known as the “Kigali amendment” and entered into force on 1 January 2019. All information related to the Montreal Protocol, including decisions and amendments can be found at the ozone secretariat website¹.
6. The Kigali amendment calls for the phase-down of hydrofluorocarbons (HFCs). These gases are used as replacements for a batch of ozone-depleting substances phased-out by the original Montreal Protocol.
7. With the adoption of the Kigali amendment, a new Annex F has been introduced in the Montreal Protocol establishing, among other provisions, limits on production and consumption for a list of HFCs that became “controlled substances” under the Protocol. With the entry into force of the amendment, it is expected that countries will gradually phase down HFCs by more than 80 percent over the next 30 years and replace them with more environmentally friendly alternatives, thus contributing to global efforts to mitigate climate change. Reducing the emissions of these greenhouse gases could prevent up to 0.5 °C of global warming by the end of this century, while continuing to protect the ozone layer.

¹ <https://ozone.unep.org/treaties/montreal-protocol>

8. Since the criteria in the GHS apply to “*any of the controlled substances listed in annexes to the Montreal Protocol...*”, HFCs included in Annex F of the Protocol fall automatically within the scope of the GHS hazard class “hazardous to the ozone layer” as regards classification and labelling. This means that the current hazard statement “*Harms public health and the environment by destroying ozone in the upper atmosphere*” also applies to HFCs. However, these gases are addressed in the Montreal and Kyoto Protocols for their high global warming potential² but are not recognized as ozone depleting substances.

Action requested from the Sub-Committee

9. The Sub-Committee is invited to take note of the information concerning the Kigali amendment to the Montreal Protocol and its impact on the scope of the GHS hazard class “hazardous to the ozone layer”.

10. The Sub-Committee is also invited to consider adapting the existing hazard statement for this hazard class to address the controlled substances listed in Annex F of the Montreal Protocol, for example, as follows (new text is shown **in bold**):

*“Harms public health and the environment **due to its global warming potential** or by destroying ozone in the upper atmosphere”*

11. This change is intended to improve hazard communication for HFCs falling within the scope of the GHS hazard class “hazardous to the ozone layer” in accordance with Annex F to the Montreal Protocol. No changes are needed for the GHS classification criteria since it remains aligned with the criteria in the Montreal Protocol and its annexes, as amended or adjusted.

² Global warming potential (GWP): “An index representing the combined effect of the differing times greenhouse gases remain in the atmosphere and their relative effectiveness in absorbing outgoing infrared radiation.”. *Source: United Nations Climate Change, Glossary of climate change acronyms and terms (<https://unfccc.int/process-and-meetings/the-convention/glossary-of-climate-change-acronyms-and-terms>)*