

## The Kigali Amendment

One of the important requirements of the Kigali Amendment to the Montreal Protocol is that from 1<sup>st</sup> January 2019<sup>1</sup> (or two years later if required<sup>2</sup>) an import and export licencing system for hydrofluorocarbons (HFCs) needs to be in place in each country that is Party to the Amendment. This applies to both Article 5 and non-Article 5 countries. To enable a licencing system to function effectively it is important that the government is able to monitor and record imports and exports of each specific HFC individually. Import and export statistics are normally collected by customs officers using the international product nomenclature system - the Harmonized Commodity Description and Coding System, or Harmonized System (HS). However, until the HS is revised in

2022, all HFCs are contained in a single HS code which does not allow differentiation of the individual chemicals or of mixtures (also referred to as 'blends').<sup>3</sup> In advance of the release of the new version of the HS, there are actions which countries can take in the interim. The suggested approach is to establish additional digits in the national (domestic) HS codes to identify specific HFCs.

**This document suggests how the recommendation of the World Customs Organization (WCO) on establishing additional digits in the existing 2017 national HS codes to identify specific HFCs could be implemented.** This document is intended to accompany the OzonAction policy brief: "*HS CODES FOR HFCs - Advice for countries in advance of the 2022 HS code update.*"<sup>4</sup>

## WCO Recommendation: HS contracting Parties establish additional digits in the current national HS to identify specific HFCs

To facilitate monitoring and control over imports and exports using the HS, a country has the option to add additional subdivisions, at the national level, under the six-digit HS code.

Section 4 of Article 3 of *The International Convention on the Harmonized Commodity Description and Coding System* allows for further national subdivisions below the six digit level. It is thus recommended that countries use national subdivisions at the seven or more digit levels under the existing headings and subheadings to account for specific HFC and HFC-containing mixtures under HS 2017. Where appropriate a regional approach could be adopted.

Therefore, as an interim measure, the WCO approved at its Council Session in June 2019 a new Recommendation that HS Contracting Parties insert *as soon as possible* the relevant new additional subheadings in their statistical nomenclatures.<sup>5</sup>

Countries are therefore recommended to expeditiously insert additional subdivisions for the HFCs and HFC-containing mixtures controlled under the Montreal Protocol by virtue of the Kigali Amendment. The following tables are intended to explain, provide examples and give a suggested methodology to apply the WCO recommendation<sup>6</sup> to mixtures. Codes for pure substances are given on the last page.



## Establishing additional digits in the existing national HS codes to identify specific mixtures containing HFCs

The tables below provide the text from the WCO for the recommended<sup>5</sup> further national subdivisions below the six digit level in the 2017 HS with explanation, suggested subdivision digits and examples of which refrigerant mixtures fall into each of the suggested subdivisions. Commonly used/traded mixtures (or expected to be commonly traded) are indicated in **bold**.

HS Heading	HS Sub-heading	Suggested additional Sub-heading digits	Example Mixtures	Description	Explanation/notes			
3824	3824.74			Prepared binders for foundry moulds or cores; chemical products and preparations of the chemical or allied industries (including those consisting of mixtures of natural products), not elsewhere specified or included				
				--Containing hydrochlorofluorocarbons (HCFCs), whether or not containing perfluorocarbons (PFCs) or hydrofluorocarbons (HFCs), but not containing chlorofluorocarbons (CFCs)	Mixtures containing HCFC that can contain HFC and PFCs, but not CFCs.			
				--- Containing saturated fluorinated derivative of methanes (F = 1 to 3), ethanes (F = 2 to 5) and propanes (F= 5 to 7), 1,1,1,3,3-pentafluorobutane (HFC-365mfc) and 1,1,1,2,2,3,4,5,5,5-decafluoropentane (HFC-43-10mee)	Mixtures containing HCFC and HFC			
			3824.74.10	R-401A R-408A R-401B R-411A R-401C R-411B R-402A R-412A R-402B R-415A				
			3824.74.20	<b>R-406A</b> <b>R-409A</b> R-409B R-414A R-414B	--- Other, containing substances of subheadings 2903.71 to 2903.75 (i.e. <b>2903.71</b> : HCFC-22, <b>2903.72</b> : HCFC-123, <b>2903.73</b> : HCFC-141, HCFC-141b, <b>2903.74</b> : HCFC-142, HCFC-142b, <b>2903.75</b> : HCFC-225, HCFC-225ca, HCFC-225cb)	HCFC mixtures, with no HFC or PFC (not controlled under the Kigali Amendment)		
			3824.74.90	R-403A R-403B R-509A	--- Other	HCFC mixtures containing PFC (not controlled under the Kigali Amendment)		
			3824	3824.78			Prepared binders for foundry moulds or cores; chemical products and preparations of the chemical or allied industries (including those consisting of mixtures of natural products), not elsewhere specified or included	
							--Containing perfluorocarbons (PFCs) or hydrofluorocarbons (HFCs), but not containing chlorofluorocarbons (CFCs) or hydrochlorofluorocarbons (HCFCs)	Mixtures containing HFCs and PFCs , but not HCFC or CFCs.
							--- Containing trifluoromethane (HFC-23) or perfluorocarbons (PFCs) but not containing chlorofluorocarbons (CFCs) or hydrochlorofluorocarbons (HCFCs)	
						3824.78.11	R-508A R-508B	---- Containing trifluoromethane (HFC-23)
3824.78.19	R-413A	---- Other				i.e. containing PFCs, but not HFC-23, CFCs or HCFCs (not controlled under the Kigali Amendment)		

HS Heading	HS Sub-heading	Suggested additional Sub-heading digits	Example Mixtures	Description	Explanation/notes	
				--- Containing other hydrofluorocarbons (HFCs) but not containing chlorofluorocarbons (CFCs) or hydrochlorofluorocarbons (HCFCs):		
		3824.78.21	R-404A R-428A R-434A R-507A	---- Containing 15 % or more by mass of 1,1,1-trifluoroethane (HFC-143a)		
		3824.78.22	R-407B R-410B R-417B R-419A R-421A R-421B R-422A R-422B	R-422C R-422D R-422E	---- Other, not included in the subheading above, containing 55 % or more by mass of pentafluoroethane (HFC- 125) but not containing unsaturated fluorinated derivatives of acyclic hydrocarbons (HFOs <sup>7</sup> )	
		3824.78.23	R-407A R-410A R-417A R-419B R-424A R-438A R-439A R-452A	R-452C R-460A	---- Other, not included in the subheadings above, containing 40 % or more by mass of pentafluoroethane (HFC-125)	
		3824.78.24	R-407C R-407D R-407E R-407F R-407G R-407H R-417C R-423A R-425A R-426A	R-427A R-437A R-442A R-453A R-458A	---- Other, not included in the subheadings above, containing 30 % or more by mass of 1,1,1,2-tetrafluoroethane (HFC-134a) but not containing unsaturated fluorinated derivatives of acyclic hydrocarbons (HFOs)	
		3824.78.25	R-448A R-449A R-449B	R-449C R-460B	---- Other, not included in the subheadings above, containing 20 % or more by mass of difluoromethane (HFC-32) and 20 % or more by mass of pentafluoroethane (HFC-125)	
		3824.78.26	R-429A R-430A R-431A R-435A R-440A R-444A R-444B R-445A R-446A R-447A R-447B R-450A R-451A R-451B R-452B R-454A R-454B R-454C R-455A R-456A	R-457A R-459A R-459B R-466A R-512A R-513A R-513B R-515A	---- Other, not included in the subheadings above, containing saturated fluorinated derivative of methanes (F = 1 to 3), ethanes (F = 2 to 5) and propanes (F= 5 to 7), 1,1,1,3,3-pentafluorobutane (HFC-365mfc) and 1,1,1,2,2,3,4,5,5,5-decafluoropentane (HFC-43-10mee)	(i.e. containing HFC-23, HFC-32, HFC-41, HFC-152, HFC-152a, HFC-125, HFC-143a, HFC-143, HFC-134a and HFC-134, HFC-227ea, HFC-236cb, HFC-236ea, HFC-236fa, HFC-245fa, HFC-245ca, HFC-365mfc and/or HFC-43-10mee)
		3824.78.29	R-514A	---- Other	(i.e. containing other HFCs not listed in subheadings 3824.78.21 to 3824.78.26 - can also contain HFOs)	

# Establishing additional digits in the existing national HS codes to identify specific HFCs (pure substances)

## Halogenated derivatives of hydrocarbons (2903)

HS Sub-heading	Suggested additional Sub-heading digits	Description
2903.39		
		--- Saturated fluorinated derivatives of acyclic hydrocarbons
	2903.39.11	---- Trifluoromethane (HFC-23)
	2903.39.12	---- Difluoromethane (HFC-32)
	2903.39.13	---- Fluoromethane (HFC-41), 1,2-difluoroethane (HFC-152) and 1,1-difluoroethane (HFC-152a)
	2903.39.14	---- Pentafluoroethane (HFC-125), 1,1,1-trifluoroethane (HFC-143a) and 1,1,2-trifluoroethane (HFC-143)
	2903.39.15	---- 1,1,1,2-Tetrafluoroethane (HFC-134a) and 1,1,2,2-tetrafluoroethane (HFC-134)
	2903.39.16	---- 1,1,1,2,3,3,3-Heptafluoropropane (HFC-227ea), 1,1,1,2,2,3-hexafluoropropane (HFC-236cb), 1,1,1,2,3,3-hexafluoropropane (HFC-236ea) and 1,1,1,3,3,3-hexafluoropropane (HFC-236fa)
	2903.39.17	---- 1,1,1,3,3-Pentafluoropropane (HFC-245fa) and 1,1,2,2,3-pentafluoropropane (HFC-245ca)
	2903.39.18	---- 1,1,1,3,3-Pentafluorobutane (HFC-365mfc) and 1,1,1,2,2,3,4,5,5,5-decafluoropentane (HFC-43-10mee)
	2903.39.19	---- Other
		--- Unsaturated fluorinated derivatives of acyclic hydrocarbons (not controlled under Kigali)
	2903.39.21	---- 2,3,3,3-Tetrafluoropropene (HFO-1234yf), 1,3,3,3-tetrafluoropropene (HFO-1234ze) and (Z)-1,1,1,4,4,4-hexafluoro-2-butene (HFO-1336mzz)
	2903.39.29	---- Other
		--- Brominated or iodinated derivatives of acyclic hydrocarbons:
	2903.39.31	---- Methyl bromide (bromomethane)
	2903.39.39	---- Other

## References

1. The Kigali Amendment reached the minimum number of ratifications required to enter into force on 1 January 2019.
2. Any Party operating under paragraph 1 of Article 5 that decides it is not in a position to establish and implement such a system by 1 January 2019 may delay taking those actions until 1 January 2021.
3. This publication uses the terminology 'Mixtures' (as used in the WCO HS documentation) to describe commodities containing two or more ozone-depleting substances or alternatives. It should be noted that the term 'Blends' is also frequently used in the context of refrigerants. For example ASHRAE and the Montreal Protocol's Technology and Economic Assessment Panel use the terminology: 'Refrigerant Blends'.
4. HS Codes for HFCs - Advice for countries in advance of the 2022 HS code update. The publication can be downloaded from the OzonAction website: [www.unenvironment.org/ozonaction/resources/toolkits-manuals-and-guides/hs-codes-hfcs-advice-countries-advance-2022-hs-code-update](http://www.unenvironment.org/ozonaction/resources/toolkits-manuals-and-guides/hs-codes-hfcs-advice-countries-advance-2022-hs-code-update)
5. Recommendation of the Customs Co-operation Council on the insertion in national statistical nomenclatures of subheadings to facilitate the collection and comparison of data on the international movement of substances controlled by virtue of the Kigali Amendment to the Montreal Protocol on substances that deplete the ozone layer. The updates to HS 2022 were adopted in June 2019 and became final after a six month objection period. [http://www.wcoomd.org/-/media/wco/public/global/pdf/about-us/legal-instruments/recommendations/hs/recommendation\\_kigali.pdf?la=en](http://www.wcoomd.org/-/media/wco/public/global/pdf/about-us/legal-instruments/recommendations/hs/recommendation_kigali.pdf?la=en)
6. The suggested codes on pages 2-4 assume a country has not already created seven or more digit level codes for HFCs and other substances.
7. HFOs are not covered by the Kigali Amendment.

This publication was prepared by the UN Environment Programme in cooperation with the World Customs Organization (WCO); we are very grateful to the WCO for the assistance provided.

Additional guidance from the United States Government is gratefully acknowledged.