



COMMONLY TRADED HCFCs AND MIXTURES CONTAINING HCFCs



COMMONLY TRADED HYDROCHLOROFLUOROCARBONS (HCFCs)

Chemical name	Chemical formula	Refrigerant Designation	ODP ¹	GWP (100y) ²	CAS number	UN number	ASHRAE Safety Group Classification ³	Previous HS code (prior to 31 Dec 2011)	New HS code (since 1 Jan 2012)	Type of container
Chlorodifluoromethane	CHF ₂ Cl	HCFC-22	0.055	1780	75-45-6	1018	A1	2903.49	2903.71	Pressurized cylinders, ISO tanks
Dichlorotrifluoroethane	C ₂ HF ₃ Cl ₂	HCFC-123	0.06	79	306-83-2	1078	B1	2903.49	2903.72	Drums, sometimes also pressurised cylinders or ISO tanks
Chlorotetrafluoroethane	C ₂ HF ₄ Cl	HCFC-124	0.022	527	2837-89-0	1021	A1	2903.49	2903.79 ⁴	Pressurised cylinders, ISO tanks
Dichlorofluoroethane	C ₂ H ₃ FCl ₂	HCFC-141b	0.11	800	1717-00-6	9274	-	2903.49	2903.73	Drums, truck or rail cisterns
Chlorodifluoroethane	C ₂ H ₃ F ₂ Cl	HCFC-142b	0.065	2070	75-68-3	2517	A2	2903.49	2903.74	Pressurised cylinders, ISO tanks
Dichloropentafluoropropane	C ₃ HF ₅ Cl ₂	HCFC-225ca	0.025	127	422-56-0	Not established	-	2903.49	2903.75	Drums, truck or rail cisterns
Dichloropentafluoropropane	C ₃ HF ₅ Cl ₂	HCFC-225cb	0.033	525	507-55-1	Not established	-	2903.49	2903.75	Drums, truck or rail cisterns

1. Ozone Depleting Potential, Montreal Protocol 'reporting' values, Montreal Protocol Handbook, 2012.

2. Global Warming Potential, WMO Scientific Assessment Report, 2014

3. A1 = Lower toxicity, no flame propagation (non-flammable); B1 = Higher toxicity, no flame propagation (non-flammable); A2 = Lower toxicity, flammable

4. Code 2903.79 covers also other HCFCs which have not been assigned a separate HC code

COMMONLY USED REFRIGERATION MIXTURES CONTAINING HCFCs

Refrigerant Designation	Composition, substances*	Composition (Mass %)	ASHRAE Safety Group Classification†
R-401A	HCFC-22/HFC-152a/HCFC-124	53/13/34	A1
R-401B	HCFC-22/HFC-152a/HCFC-124	61/11/28	A1
R-401C	HCFC-22/HCFC-152a/HCFC-124	33/15/52	A1
R-402A	HFC-125/HC-290/HCFC-22	60/2/38	A1
R-402B	HFC-125/HC-290/HCFC-22	38/2/60	A1
R-403A	HC-290/HCFC-22/PFC-218	5/75/20	A2
R-403B	HC-290/HCFC-22/PFC-218	5/56/39	A1
R-406A	HCFC-22/HC-600a/HCFC-142b	55/4/41	A2
R-408A	HFC-125/HFC-143a/HCFC-22	7/46/47	A1
R-409A	HCFC-22/HCFC-124/1HCFC-142b	60/25/15	A1
R-409B	HCFC-22/HCFC-124/HCFC-142b	65/25/10	A1
R-411A	HC-1270/HCFC-22/HFC-152a	1.5/87.5/11	A2
R-411B	HC-1270/HCFC-22/HFC-152a	3/94/3	A2
R-412A	HCFC-22/PFC-218/HFC-143b	70/5/25	A2
R-414A	HCFC-22/HCFC-124/HC-600a/HCFC-142b	51/28.5/4/16.5	A1
R-414B	HCFC-22/HCFC-124/HC-600a/HCFC-142b	50.0/39.0/1.5/9.5	A1
R-415A	HCFC-22/HFC-152a	82/18	A2
R-416A	HCFC-134a/HCFC-124/HC-600	59.0/39.5/1.5	A1
R-418A	HC-290/HCFC-22/HFC-152a	1.5/96.0/2.5	A2

* HCFC = hydrochlorofluorocarbon, HFC = hydrofluorocarbon, PFC = perfluorocarbon, HC = hydrocarbon

† A1 = Lower toxicity, no flame propagation (non-flammable) A2 = Lower toxicity, flammable

N.B. The HS Code for all the above mixtures (i.e. mixtures containing HCFCs) is: 3824.74

OzonAction
 United Nations Environment Programme
 (UNEP)
 Division of Technology, Industry and
 Economics
 1 rue Miollis, Building VII
 Paris 75015, France
www.unep.org/ozonaction
ozonaction@unep.org