



ACCEPTABLE SUSTITUTE REFRIGERANTS

Substitutes (Name Used in Federal Register), May 17, 2013	Trade Name	Refrigerant Being Replaced	Retrofit/New
Centrifugal Chillers			
HCFC-123	123	CFC-11	R, N
HCFC-22	22	CFC-11	N
HFC-134a	134a	CFC-11	N
HFC-227ea		CFC-11	N
HFC-245fa	Genetron® 245fa	CFC-11	R, N
HCFC-22	22	CFC-12, CFC-114, R-500	N
HCFC-123	123	CFC-12, CFC-114, R-500	N
HCFC-124		CFC-114	R, N
HFC-134a	134a	CFC-12, CFC-114, R-500	R, N
HFC-227ea		CFC-12, CFC-114, R-500	N
HFC-236fa		CFC-114	R, N
HFC-245fa	Genetron® 245fa	CFC-114	R, N
R-406A	GHG	R-500	R, N
Reciprocating and Screw Chillers			
HCFC-22	22	CFC-12, R-500	N
HFC-134a	134a	CFC-12, R-500	R, N
HFC-227ea		CFC-12, R-500	N
R-401A, R-401B	MP-39, MP-66	CFC-12, R-500	R, N
Ice Skating Rinks			
HCFC-22	22	CFC-12, R-502	R, N
R-401A, R-401B	MP39, MP-66	CFC-12	R
R-407A, R-407B	Klea 407A, 407B	R-502	R, N
R-428A	RS-52	R-502	R, N
Free Zone	Free Zone/RB-276	CFC-12	R, N
All categories			
Various		CFC-12, R-500	R, N





Unacceptable Substitute Refrigerants

Unacceptable Substitute Refrigerants Significant New Alternatives Policy (SNAP) Program as of May 17, 2013			
Substitutes (Name Used in Federal Register)	ODS Being Replaced	End-Uses where Unacceptable	Reason
All flammable refrigerants, including OZ-12 (Hydrocarbon Blend A) and HC-12a (Hydrocarbon Blend B), except for HFC-152a in new MVAC equipment	CFC-12	Motor Vehicle Air Conditioning, retrofit and new	lack of adequate risk assessment that characterizes incremental flammability risk
OZ-12 (Hydrocarbon Blend A) and HC-12a (Hydrocarbon Blend B)	CFC-12	All end-uses other than Industrial Process Refrigeration, retrofit and new	lack of adequate risk assessment that characterizes incremental flammability risk
R-141b	CFC-11	Centrifugal Chillers, new	high ODP, other substitutes with lower overall risk have been identified
R-1761	CFC-12	All end-uses, retrofit and new	contains CFC-12
R-403B	R-502	All end-uses other than Industrial Process Refrigeration, retrofit and new	contains a perfluorocarbon that exhibits extremely high GWP and very long lifetime
R-405A	CFC-12	All end-uses, retrofit and new	contains a perfluorocarbon that exhibits extremely high GWP and very long lifetime
MT-31	all CFCs and HCFCs	All end-uses, retrofit and new	a chemical contained in this blend presents an unacceptable toxicity risk
Hexafluoropropylene (HFP) and all HFP-containing blends	all CFCs and HCFCs	All end-uses, retrofit and new	presents an unacceptable toxicity risk
Self-Chilling Cans using HFC-134a or HFC-152a	CFC-12, HCFC-22, R-502	Household Refrigeration, Transport Refrigeration, Vending Machines, Cold Storage Warehouses and Retail Food Refrigeration; retrofit and new	unacceptably high greenhouse gas emissions from direct release of refrigerant to the atmosphere
NARM-22	HCFC-22	All end-uses, retrofit and new	contains HCFC-22

