

Refrigerants/Lubricants Approved for Use in Copeland® Compressors

	Refrigerants	Similar To	Application		Lubricant Choices			Comments
			Retrofit	New	Preferred	Alternate #1	Alternate #2	
Ozone Depleting	CFC R-12		L,M		MIN	AB & MIN		Phased Out in 1996
	CFC R-502		L,M		MIN	AB & MIN	POE-32	Phased Out in 1996
	HCFC R-22		L,M,H		MIN	AB & MIN	POE-32	No New Equipment 2010
Interims	HCFC R401A	R-12	M,H		AB & MIN	POE-32 & MIN	POE-32	Service Only Suva® MP39
	HCFC R-401B	R-12	L,M		AB & MIN	POE-32 & MIN	POE-32	Service Only Suva® MP66
	HCFC R-402A	R-502	L,M		AB & MIN	POE-32 & MIN	POE-32	Service Only Suva® HP80
	HCFC R-402B	R-502	L,M		AB & MIN	POE-32 & MIN	POE-32	Service Only Suva® HP81
	HCFC R-408A	R-502	L,M		AB & MIN	POE-32 & MIN	POE-32	Service Only FX10
	HCFC R-409A	R-12	L,M		AB & MIN	POE-32 & MIN	POE-32	Service Only FX56
	HFC R-134a	R-12	M,H	M,H	POE-32			
Non-Ozone Depleting	HFC R-404A	R-502	L,M	L,M	POE-32			Suva® HP62, Forane® FX70
	HFC R-507	R-502	L,M	L,M	POE-32			Genetron® AZ50
	HFC R-407A	R-22	L,M	L,M	POE-32			
	HFC R-407C	R-22	L,M,H	L,M,H	POE-32			Suva® 9000/KLEA 66
	HFC R-410A			M,H	POE-32			
	HFC R-422A/D	R-22	L,M		MIN	POE-32	AB	ZP & ZB KCP Copeland Scroll® Models Only
	HFC R-438A	R-22	L,M		MIN	POE-32	AB	Discus® Supermarket Racks Only; ISCEON® MO99
	R-704 Helium			Cryogenic	PAG			ZC Copeland Scroll® Models Only
	R-744 CO ₂			Sub-Critical	POE**			ZO Copeland Scroll® Models Only

Legend:

MIN*: Mineral Oil (Copeland® 46BWMO, Sonneborn Suniso 3GS), Chevron/Texaco Capella WF32) *Mineral oils are interchangeable for 'top off' purposes
 AB: Alkyl Benzene Oil (Copeland® Ultra 200, Shrieve Zerol 200 TD, Sonneborn Suniso AKB200A, Shell 2212)
 POE 32: Polyolester Oil (Copeland® Ultra 32-3MAF, Lubrizol Emkarate RL32-3MAF, Parker EMKARATE RL32-3MAF/ (Virginia) LE323MAF, Nu Calgon 4314-66 (EMKARATE RL32-3MAF)
 Hatcol 22 CC, Copeland® Ultra 22 CC & Mobil Arctic 22 CC (last three for 'top off' only)
 POE**: Contact Application Engineer for oil details
 PAG: Polyalkylene Glycol Oil (Lubrizol RPAG 62, UCON LB300X)
 POE-32 & MIN: Minimum 50% POE
 AB & MIN: Minimum 50% Alkyl Benzene
 L: Low Temperature Application (Refrigeration) For R-407A, R-407C, R-422A/D, R-438A, Demand Cooling® is required for low temperature application - See AE guidelines for details
 M: Medium Temperature Application (Refrigeration)
 H: High Temperature Application (Air-Conditioning, Heat Pump, Refrigeration)

For specific product availability and performance data refer to Emerson Climate Technologies, Inc. sales literature
 Refer To Application Bulletins, Change-Over Guidelines And MSDS Sheets for additional information at EmersonClimate.com