

Refrigerant Matrix

Reference Document RD-0001-E

Refrigerant (ASHRAE#)	Refrigerant Supplier(s)	Refrigerant Reference(s)	Alternate for:	Type	Refrigerant Components	Refrigerant Composition (%)	Type	ODP	GWP	Vapor Pressure (DP) PSIG			Compatible Lubricants*
										-10°F	+45°F	+130°F	
R12	Various		N/A	CFC	12	100	Pure Fluid	1.000	10600	4.49	41.68	181.01	<i>MO, SA</i>
R500	Various				12/152a	74/26	Azeotrope	0.630	7900	7.76	51.85	218.20	<i>MO, SA</i>
R502	Various				22/115	49/51		0.230	4500	22.56	88.72	320.84	<i>MO, SA</i>
R22	Various			HCFC	22	100	Pure Fluid	0.050	1700	16.47	76.02	296.80	<i>MO, SA</i>
R134a	Various		R12	HFC	134a	100	Pure Fluid	0.000	1300	1.98	39.98	198.92	<i>POE, PVE</i>
R401A	Dupont/Allied	MP39		HCFC	22/152a/124	53/13/34	Zeotrope	0.030	1100	2.40	40.54	197.50	<i>SA, MO</i>
R401B	Dupont/Allied	MP66			22/152a/124	61/11/28		0.035	1200	3.50	44.00	210.00	<i>SA, MO</i>
R406A	Ind. Ref. Prod.	GHG-12			22/142b/600a	55/41/4		0.036	1900	1.87	37.33	179.00	<i>MO, SA</i>
R409A	Elf-Atochem	FX56			22/142b/124	60/15/25		0.050	1500	2.15	40.01	199.00	<i>MO, SA</i>
R414B	ICOR	Hot Shot			22/124/600a/142b	50/39/1.5/9.5		0.031	1300	0.8**	35.40	179.50	<i>MO, SA</i>
R290⁺	Various	Propane			HC	N/A		100	Pure Fluid	0.000	0	31.40	85.40
R600a⁺	Various	Isobutane	HC	N/A	100	Pure Fluid	0.000	3	9.00	29.20	110.50	<i>MO, SA</i>	
R402A	Dupont	HP80	R502	HCFC	22/125/290	38/60/2	N-Azeotrope	0.020	2700	26.00	100.00	370.00	<i>SA, POE</i>
R402B	Dupont	HP81			22/125/290	60/38/2		0.030	2300	22.66	91.67	345.00	<i>SA, POE</i>
R403B	Rhone-Poulenc	R69L			22/218/290	56/39/5		0.025	4300	29.60	103.50	362.80	<i>MO, SA, POE</i>
R408A	Elf-Atochem	FX10			22/143a/125	47/46/7		0.016	3000	19.40	86.20	332.10	<i>MO, SA, POE</i>
R404A	Various	HP62, FX70		HFC	125/143a/134a	44/52/4	Azeotrope	0.000	3800	23.96	94.54	353.07	<i>POE, PVE</i>
R507	Allied	AZ50			125/143a	50/50		0.000	3900	25.90	98.90	367.80	<i>POE</i>
R422C	ICOR	One Shot C			125/134a/600a	82/15/3		0.000	3033	20.40	88.70	354.10	<i>POE, (MO, SA)</i>
R407A	ICI	KLEA-60			32/125/134a	20/40/40		0.000	2000	29.90	92.80	343.60	<i>POE</i>
R407B	ICI	KLEA-61	32/125/134a	10/70/20	0.000	2700	20.77	90.87	362.46	<i>POE</i>			
R407C	Various	AC9000, KLEA-66	R22	HFC	32/125/134a	23/25/52	Zeotrope	0.000	1700	12.16	69.86	303.43	<i>POE, PVE, (SA)</i>
R410A	Various	AC9100, AZ20			32/125	50/50	0.000	2000	37.74	132.34	478.87	<i>POE, PVE</i>	
R404A	Various	HP62, FX70			125/143a/134a	44/52/4	0.000	3800	23.96	94.54	353.07	<i>POE, PVE</i>	
R507	Allied	AZ50			125/143a	50/50	0.000	3900	25.90	98.90	367.80	<i>POE</i>	
R417A	Various	NU22, Isceon MO59			125/134a/600	47/50/3	0.000	1950	11.30	62.60	260.00	<i>POE, (MO, SA)</i>	
R422A	Isceon	One Shot MO79			125/134a/600a	85/12/3	0.000	2530	23.90	94.00	351.60	<i>POE, (MO, SA)</i>	
R422B	Enuiro	NU22B			125/134a/600a	55/42/3	0.000	2080	17.10	77.40	300.60	<i>POE, (MO, SA)</i>	
R422C	ICOR	One Shot C			125/134a/600a	82/15/3	0.000	3033	20.40	88.70	354.10	<i>POE, (MO, SA)</i>	
R422D	Isceon	MO29			125/134a/600a	65/32/3	0.000	2700	19.80	84.20	320.20	<i>POE, (MO, SA)</i>	
R421A	Choice Ref.				125/134a	58/42	0.000	2600	16.50	76.20	298.90	<i>POE, (MO, SA)</i>	
R424A	Ref. Products	RS-44			125/134a/600/600a/601a	50/47/1/1/1	0.000	2011	5.80	51.20	245.70	<i>POE, (MO, SA)</i>	
R427A	Forane	FX100			32/125/143a/134a	15/25/10/50	0.000	1830	10.80	65.60	289.50	<i>POE, (MO, SA)</i>	
R438A	Dupont/Isceon	MO99	32/125/134a/600/601a	8/45/44/2/1	0.000	2264	11.60	67.70	292.00	<i>POE, (MO, SA)</i>			

* Compatible Lubricant: MO = Mineral Oil; SA = Synthetic Alkylate (also referred to as AB or Alkylbenze); POE = Polyol Ester; PVE = Polyvinyl Ether

Lubricants shown in ***BOLD ITALIC*** are recommended for use with the corresponding refrigerants. Consult Tecumseh's Policy Bulletin PB105 to verify approved compressor lubricants.

** Inches of mercury below atmospheric pressure

+ Local regulations apply to the use of Hydrocarbon refrigerants

Notes:

1. This listing is for reference only and does not represent an endorsement by Tecumseh Products Company of any particular refrigerant supplier.
2. GWP, Global Warming Potential (for 100 year integration)

Tecumseh approved alternate R22 refrigerant, guidelines available

Tecumseh guidelines are available for these additional listed refrigerants