Fluorinated Refrigerants

R-407C

R-407C: Indirect substitute (Retrofit) for R-22.

R-407C is an A1 non-azeotropic HFC blend refrigerant gas used in new equipment. Due to its thermodynamic characteristics, it is also used as a R-22 replacement via retrofit in some applications.

Components:	ASHRAE Name:
R-32, R-125, R-134a	R-407C

Technical specifications:

0	1774	A1	POE
ODP	GWP	Safety classification	Compatible lubricants

Temperature Range: High and Medium

Replacement:
R-22 only in New Equipment

Type of replacement:
Substitute (New Equipment). Retrofit.

Applications:

- Climatization
- Commercial Refrigeration
- Refrigerated Transport
- Industrial Refrigeration

Packaging sizes for R-407C:

- Cylinders
- Roll Drums
- ISO Tanks

Instructions:

Charge the system in the liquid phase. An oil change is required when replacing a CFC or HCFC. For retrofit applications, the expansion valve may need to be adjusted or replaced with a more suitable one depending on the application.

Thermodinamic properties chart:

Bubble point

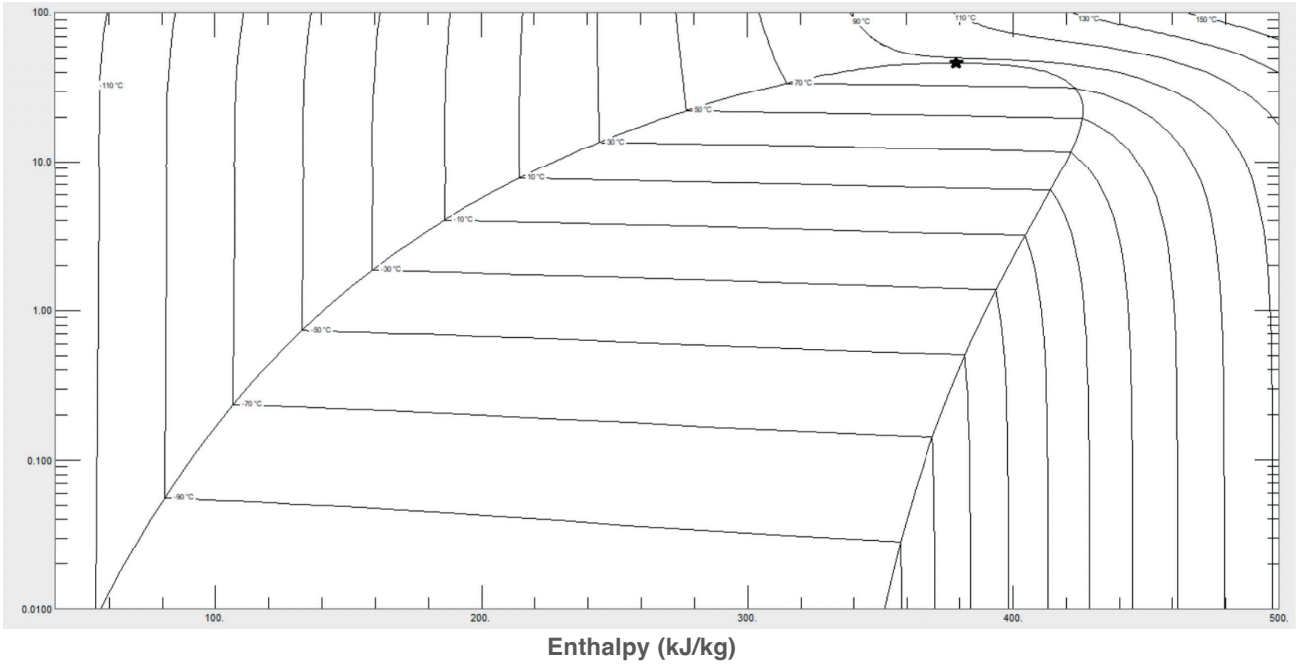
Temperature (ºC)	Absolute pressure (bar)	Liquid density (kg/m³)	Vapour Density (kg/m³)	Liquid enthalpy (kJ/kg)	Gas enthalpy (kJ/kg)
-60	0,4298	1430	1,9020	119,34	390,87
-55	0,5674	1415,1	2,4749	125,82	393,19
-50	0,7383	1400,1	3,1775	132,33	395,51
-45	0,9481	1384,9	4,0299	138,87	397,84
-40	1,2026	1369,5	5,0540	145,45	400,17
-35	1,5081	1353,9	6,2735	152,07	402,47
-30	1,8713	1338,1	7,7142	158,74	404,75
-25	2,2992	1321,9	9,4044	165,46	406,99
-20	2,7993	1305,5	11,3750	172,24	409,19
-15	3,3792	1288,8	13,6590	179,07	411,33
-10	4,0468	1271,7	16,2960	185,97	413,41
-5	4,8105	1254,2	19,3250	192,95	415,42
0	5,6787	1236,2	22,7940	200,00	417,33
5	6,6602	1217,8	26,7560	207,14	419,16
10	7,7641	1198,7	31,2720	214,37	420,87
15	8,9995	1179,1	36,4110	221,71	422,45
20	10,3760	1158,7	42,2550	229,16	423,89
25	11,9030	1137,5	48,9030	236,74	425,16
30	13,5910	1115,4	56,4720	244,46	426,25
35	15,4500	1092,1	65,1060	252,34	427,12
40	17,4900	1067,7	74,9860	260,40	427,74
45	19,7230	1041,7	86,3460	268,67	428,06
50	22,1600	1013,9	99,4940	277,18	428,03

Thermodinamic properties chart:

Dew point

Temperature (ºC)	Absolute pressure (bar)	Liquid density (kg/m³)	Vapour Density (kg/m³)	Liquid enthalpy (kJ/kg)	Gas enthalpy (kJ/kg)
-60	0,27689	1459,8	1,3700	121,53	375,81
-55	0,37601	1444,6	1,8251	127,75	378,84
-50	0,50221	1429,3	2,3941	134,02	381,84
-45	0,66057	1413,8	3,0966	140,33	384,83
-40	0,85668	1398,2	3,9537	146,69	387,78
-35	1,0966	1382,3	4,9889	153,11	390,69
-30	1,3869	1366,2	6,2275	159,58	393,57
-25	1,7345	1349,8	7,6974	166,10	396,39
-20	2,1469	1333,2	9,4287	172,69	399,15
-15	2,6319	1316,2	11,4550	179,35	401,85
-10	3,1978	1298,9	13,8120	186,07	404,49
-5	3,853	1281,2	16,5420	192,87	407,04
0	4,6071	1263,1	19,6890	199,75	409,51
5	5,4691	1244,4	23,3040	206,72	411,88
10	6,4488	1225,3	27,4470	213,78	414,14
15	7,5566	1205,5	32,1840	220,95	416,28
20	8,8034	1184,9	37,5940	228,23	418,28
25	10,2000	11636	43,7700	235,64	420,13
30	11,7590	11414	50,8240	243,19	421,80
35	13,4920	11181	58,8930	250,89	423,27
40	15,4130	1093,5	68,1480	258,78	424,50
45	17,5360	1067,5	78,8090	266,87	425,45
50	19,8780	1039,7	91,1660	275,21	426,07

Pressure diagram chart:



Normative:

GRIT (Gases Research Innovation & Technology) is committed to the continuous improvement of our inbuilt Quality Control, Environment and Major Accident Prevention Systems as well as close collaboration with our product and service providers. The scope of the system includes the packaging, commercialisation, storage and innovation of technical gases and the management of residual fluorinated gas and halogenated solvents.

All this work is reflected in our certificates ISO 9001 & ISO 14001. GRIT also meets AHRI 700 standard for new and recycled refrigerants.

More information:

If you want more information about our products, contact us.

EUROPE — GRIT, Gases Research Innovation & Technology

BARCELONA

Our plant:
P. I. "El Punsic", parcela 8.3,
08279 Avinyó, Barcelona. Spain.

Our office:
Avda. Diagonal 403, 6º 3ª
08008 Barcelona. Spain.

Phone: (+34) 932 721 400
E-mail: grit@grit.es
Website: www.gasesgrit.com

USA — Summit Refrigerants

HOUSTON

8541 East North Belt
Humble, Texas 77396

Phone: (+1) 281-540-2653
Toll-Free: (+1) 866-971-2653
Fax: (+1) 281-540-0385

DALLAS

2080 McDaniel Drive
Suite 200
Carrollton, Texas 75006

Phone: (+1) 469-458-3195
Fax: (+1) 469-458-3085

BATON ROUGE

10080 Industriplex Avenue
Gonzales, LA 70737

Phone: (+1) 225-744-2653
Fax: (+1) 225-677-6106