Fluorinated Refrigerants

R-507A - Regenerated

R-507A - Regenerated: Azeotropic refrigerant for the entire refrigeration range.

R-507A is a high safety (A1) azeotropic HFC blend refrigerant gas. As it is an azeotropic product it has no glide and performs like a pure product. It is designed for retrofit replacement of R-502A and its subsequent replacements, and in R-22 applications for flooded systems. It is also used in new equipment. It is a very versatile refrigerant that covers refrigeration needs from preservation to freezing, as well as industrial process cooling applications.

Currently having a GWP above 2,500 has limited its application in Europe.

IUPAC Name:	ASHRAE Name:
R-125, R-143a Pentafluoroethane, Trifluoroethane	R-507A

Technical specifications:

0	3985	A1	POE
ODP	GWP	Safety classification	Compatible lubricants

Temperature Range: High, Medium and Low

Replacement: R-502A, its HCFC and R-22 substitutes via retrofit

Type of replacement: Drop-in

Applications:

- Refrigerated Transport
- Commercial Refrigeration
- Flooded Systems
- Industrial Refrigeration

Packaging sizes for R-507A:

- Cylinders
- Roll Drums
- ISO Tanks

Instructions:

Charge the system in liquid phase. Oil change is required when replacing HCFCs. For system retrofit, adjustment of the expansion valve may be necessary, or replacement with a more suitable one depending on the application.

Thermodinamic properties chart:

Bubble point

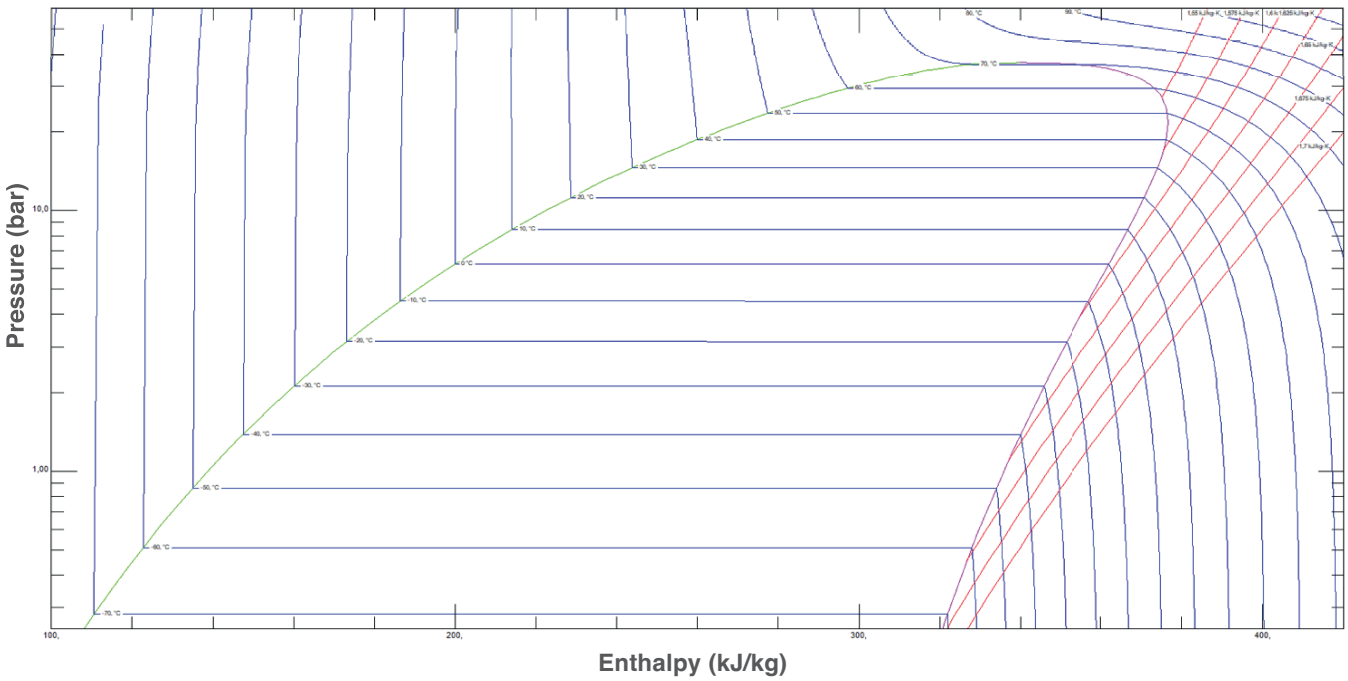
Temperature (°C)	Absolute pressure (bar)	Liquid density (kg/l)	Gas density (kg/l)	Liquid enthalpy (kJ/kg)	Gas enthalpy (kJ/kg)
-70	0,28368	1,3874	0,0016899	110,6	322,37
-65	0,38376	1,3725	0,0022438	116,66	325,26
-60	0,51053	1,3574	0,0029332	122,74	328,17
-55	0,66878	1,3423	0,0037804	128,87	331,07
-50	0,86376	1,3269	0,0048097	135,03	333,98
-45	1,1011	1,3114	0,0060475	141,24	336,88
-40	1,3867	1,2956	0,0075227	147,49	339,77
-35	1,7271	1,2795	0,0092665	153,81	342,63
-30	2,1289	1,2632	0,011313	160,18	345,46
-25	2,5992	1,2465	0,013701	166,62	348,26
-20	3,1452	1,2294	0,016471	173,13	351,02
-15	3,7746	1,2119	0,01967	179,72	353,72
-10	4,4953	1,1939	0,023351	186,39	356,36
-5	5,3156	1,1754	0,027574	193,14	358,93
0	6,2438	1,1563	0,032409	200	361,41
5	7,2889	1,1365	0,037936	206,96	363,79
10	8,4599	1,1159	0,044254	214,04	366,05
15	9,7664	1,0943	0,051478	221,25	368,17
20	11,218	1,0717	0,059751	228,61	370,13
25	12,826	1,0479	0,069254	236,13	371,89
30	14,6	1,0226	0,080217	243,84	373,42
35	16,553	0,99542	0,092945	251,77	374,67
40	18,696	0,96603	0,10786	259,96	375,58
45	21,044	0,93378	0,12558	268,48	376,06
50	23,612	0,89771	0,14704	277,41	375,95
55	26,419	0,8562	0,17388	286,91	375,03
60	29,486	0,80609	0,20928	297,28	372,81

Thermodinamic properties chart:

Dew point

Temperature (ºC)	Absolute pressure (bar)	Liquid density (kg/l)	Gas density (kg/l)	Liquid enthalpy (kJ/kg)	Gas enthalpy (kJ/kg)
-70	0,2836	1,3903	0,0016946	110,71	321,91
-65	0,38371	1,3744	0,0022481	116,73	324,96
-60	0,51051	1,3585	0,0029364	122,78	328
-55	0,66878	1,3425	0,0037815	128,87	331,03
-50	0,86375	1,3265	0,0048075	135,02	334,05
-45	1,101	1,3104	0,0060406	141,21	337,05
-40	1,3866	1,2941	0,0075093	147,46	340,03
-35	1,7268	1,2776	0,0092447	153,77	342,97
-30	2,1284	1,2608	0,011281	160,14	345,87
-25	2,5983	1,2438	0,013655	166,58	348,74
-20	3,1439	1,2265	0,016409	173,1	351,54
-15	3,7728	1,2088	0,019589	179,7	354,29
-10	4,4929	1,1907	0,023248	186,37	356,97
-5	5,3123	1,1721	0,027445	193,15	359,57
0	6,2396	1,1529	0,032251	200,02	362,07
5	7,2835	1,1331	0,037745	206,99	364,47
10	8,4533	1,1125	0,044025	214,09	366,75
15	9,7584	1,091	0,051208	221,32	368,87
20	11,209	1,0685	0,059435	228,69	370,83
25	12,815	1,0448	0,068888	236,22	372,58
30	14,587	1,0196	0,079795	243,95	374,1
35	16,538	0,99262	0,092464	251,89	375,33
40	18,68	0,96345	0,10732	260,09	376,22
45	21,026	0,93146	0,12497	268,62	376,66
50	23,593	0,89569	0,14636	277,55	376,52
55	26,399	0,85454	0,17311	287,05	375,54
60	29,467	0,80485	0,20843	297,41	373,26

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