

Refrigerants RS Series

R-428A (RS52)



R-428A: DIRECT SUBSTITUTE FOR R-502 AND ITS DROP-IN HCFC'S.

RS-52 is an HFC (Hydrofluorocarbon) refrigerant gas, a direct replacement for R-12 and its HCFC substitutes (R-408A) and has no ozone depleting effect due to its zero ODP.

It is characterized by being a direct substitute that achieves the same cooling capacity and energy efficiency similar to R-502.

It is not suitable for use in centrifugal compressors.

Commercial brand:

RS-52

ASHRAE Code:

R-428A

Technical specifications:


0
ODP


3607
GWP


A1
Safety classification


Mineral, alkyl-benccenic and POE
Compatible lubricants

Temperature Range: Medium and low.



Replacement: R-502 y R-408A.



Type of replacement: Direct Drop-in

Applications:



Commercial refrigeration



Refrigerated transports



Industrial refrigeration

Packaging sizes for R-428A (RS52):

- Cylinders
- Roll drums
- Isotanks



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.

Thermodynamic properties chart:

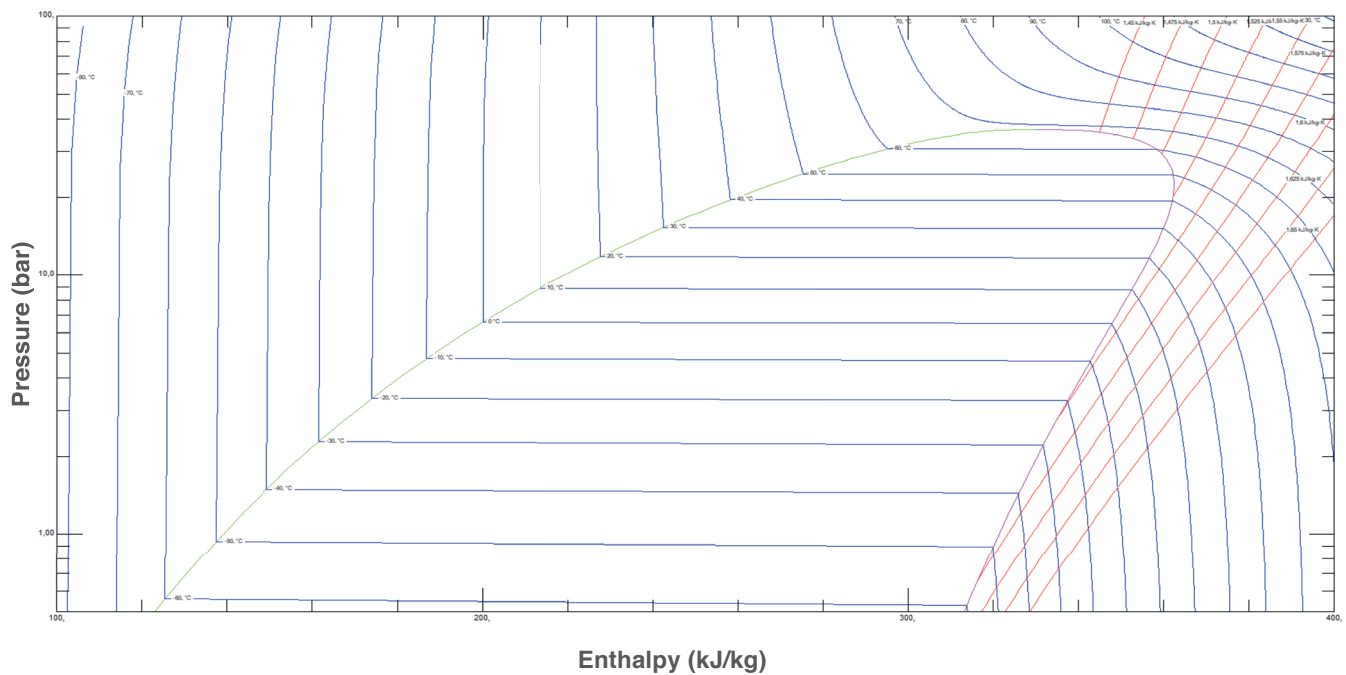
Bubble point

Temperature (°C)	Absolute pressure (bar)	Liquid density (kg/l)	Gas density (kg/l)	Liquid enthalpy (kJ/kg)	Gas enthalpy (kJ/kg)
-50	0,9352	1,3839	0,0055362	137,24	322,84
-45	1,1874	1,3675	0,0069508	143,22	325,42
-40	1,4903	1,3509	0,0086353	149,25	328,02
-35	1,8504	1,334	0,010625	155,35	330,63
-30	2,2745	1,3167	0,012959	161,5	333,23
-25	2,7699	1,2991	0,015681	167,72	335,82
-20	3,3441	1,281	0,018837	174,01	338,39
-15	4,0049	1,2624	0,022481	180,38	340,92
-10	4,7604	1,2433	0,026674	186,83	343,41
-5	5,619	1,2236	0,031484	193,36	345,83
0	6,5894	1,2032	0,036993	200	348,19
5	7,6805	1,1821	0,043295	206,74	350,45
10	8,9017	1,16	0,050504	213,6	352,61
15	10,263	1,1369	0,058759	220,59	354,62
20	11,774	1,1126	0,068228	227,72	356,49
25	13,445	1,0869	0,079129	235,02	358,16
30	15,288	1,0594	0,091741	242,51	359,6
35	17,314	1,0299	0,10644	250,22	360,77
40	19,537	0,99767	0,12376	258,2	361,59
45	21,97	0,96203	0,14451	266,53	361,97
50	24,63	0,92165	0,16996	275,31	361,72

Dew point

Temperature (°C)	Absolute pressure (bar)	Liquid density (kg/l)	Gas density (kg/l)	Liquid enthalpy (kJ/kg)	Gas enthalpy (kJ/kg)
-50	0,89631	1,3905	0,0054195	136,5	319,93
-45	1,143	1,3728	0,0068124	142,5	322,91
-40	1,4399	1,355	0,0084717	148,57	325,86
-35	1,7936	1,3369	0,010432	154,7	328,79
-30	2,211	1,3186	0,012733	160,89	331,69
-25	2,6994	1,3001	0,015416	167,15	334,54
-20	3,2662	1,2812	0,018528	173,48	337,34
-15	3,9195	1,262	0,022123	179,89	340,09
-10	4,6672	1,2423	0,026259	186,39	342,77
-5	5,5178	1,2221	0,031006	192,98	345,38
0	6,4801	1,2013	0,036443	199,66	347,89
5	7,5631	1,1798	0,042666	206,45	350,3
10	8,7764	1,1575	0,049786	213,36	352,59
15	10,13	1,1343	0,057941	220,39	354,72
20	11,633	1,11	0,0673	227,57	356,69
25	13,297	1,0842	0,078078	234,91	358,45
30	15,134	1,0569	0,090554	242,44	359,98
35	17,156	1,0275	0,10511	250,18	361,21
40	19,375	0,99562	0,12226	258,2	362,09
45	21,807	0,96035	0,14281	266,54	362,51
50	24,469	0,92045	0,16805	275,33	362,29

Pressure diagram chart:



Instructions:

Use the liquid phase of the system for the charge. Oil change is not required. For making the conversion an adjustment on the expansion valve could be required. Some applications may require a change of the expansion valve. In case an electronic valve is used Antoine coefficients can be used to adjust the system. On the trials carried with capillary tube systems, the expansion conditions were not modified.

More information:

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

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