

The reference product for commercial refrigeration

KrioNext® 404A is a non-ozone depleting refrigerant gas developed for long-term replacement of R-22 (HCFC) in low and medium temperature commercial refrigeration.

KrioNext® 404A is a slightly zeotropic mixture. For this reason it is necessary to charge systems only with refrigerant in the liquid phase, and not with vapour because that would cause a change in the composition of refrigerant that could damage the system.



Applications

KrioNext® 404A is used in low and medium commercial and industrial refrigeration, as for example supermarket display cabinets, cold rooms, stands, refrigerated transport and ice making machines.

Performance

- ✓ Capacity and efficiency similar to R-502.
- ✓ Its use has been approved by the major compressor manufacturers.

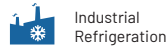
Recommended Lubricants

KrioNext® 404A is used with all lubricants that are miscible with HFC refrigerants. General Gas recommend the use of a lubricant like polyol ester (POE) that has been approved by compressor manufacturers.

Different kinds of polyol ester (POE) are not interchangeable. In case of conversion of the system, please consult the compressor manufacturer in order to verify the correct type and viscosity grade.

Physical Properties	UM	Kryon® 404A
Composition	% by weight	R-125 - 44 % R-143a - 52 % R-134a - 4 %
Environmental Classification	-	HFC
Molecular Weight	gr/grmole	97,60
Saturated Vapour Temperature @ 1,013 bar	°C	-45,20
Temperature Glide @ 1,013 bar	K	0,75
Density of Liquid @ 25°C	kg/m³	1.044,10
Density of Saturated Vapour @ 1,013 bar	kg/m³	5,35
Pressure of Saturation (Saturated Liquid) @ 25°C	bar_rel	11,53
Pressure of Saturation (Saturated Liquid) @ 50°C	bar_rel	22,09
Critical Temperature	°C	72,12
Critical Pressure	bar_rel	36,33
Critical Density	kg/m³	482,16
Heat of Evaporation @ 1,013 bar	kJ/Kg	200,34
Specific Entropy of Liquid @ 25°C	kJ/Kg°C	1,12
Specific Entropy of Vapour @ 25°C	kJ/Kg°C	1,60
CP/CV Ratio @ 25°C - 1,013 bar_ass		1,13
ODP	(R11 = 1)	0
Atmosferic Life Time	Years	40,36
GWP - IPCC rev. 4 (IPCC rev. 5)	(CO ₂ = 1)	3922 (3943)
ASHRAE Standard 34 Safety Rating		A1
Lower Flammability Limit	%	Non-flammable
Classification according to Directive 97/23/CE PED	Group	2
AIT	°C	728

KrioNext® 404A | R-404A



Industrial Refrigeration



Commercial Refrigeration



Refrigerated Transports

TEMPERATURE RANGE



TN



BT



Zero ODP



High GWP

3922 (3943)
IPCC AR4 (AR5)

Thermodynamic Properties

Temperature °C	Vapour Pressure		Density		Enthalpy		Entropy	
	Saturated Liquid bar_rel	Saturated Vapour bar_rel	Saturated Liquid kg/m³	Saturated Vapour kg/m³	Saturated Liquid KJ/kg	Saturated Vapour KJ/kg	Saturated Liquid KJ/kg*K	Saturated Vapour KJ/kg*K
-50	-0,17	-0,20	1.317,80	4,44	134,59	337,51	0,738	1,649
-48	-0,08	-0,12	1.311,70	4,88	137,09	338,72	0,749	1,646
-46	0,01	-0,03	1.305,60	5,35	139,59	339,93	0,760	1,644
-44	0,11	0,07	1.299,40	5,86	142,10	341,14	0,771	1,641
-42	0,22	0,18	1.293,20	6,40	144,62	342,34	0,782	1,639
-40	0,34	0,30	1.286,90	6,98	147,15	343,53	0,793	1,637
-38	0,47	0,42	1.280,60	7,61	149,69	344,73	0,803	1,634
-36	0,60	0,55	1.274,30	8,27	152,23	345,91	0,814	1,632
-34	0,75	0,70	1.267,90	8,98	154,79	347,10	0,825	1,630
-32	0,90	0,85	1.261,50	9,74	157,35	348,27	0,835	1,629
-30	1,06	1,01	1.255,00	10,55	159,93	349,44	0,846	1,627
-28	1,24	1,18	1.248,50	11,41	162,52	350,60	0,857	1,625
-26	1,43	1,37	1.241,90	12,32	165,11	351,75	0,867	1,623
-24	1,62	1,56	1.235,30	13,29	167,72	352,90	0,877	1,622
-22	1,83	1,77	1.228,60	14,32	170,34	354,04	0,888	1,620
-20	2,06	1,99	1.221,80	15,41	172,97	355,16	0,898	1,619
-18	2,29	2,22	1.215,00	16,57	175,61	356,28	0,909	1,618
-16	2,54	2,47	1.208,10	17,79	178,26	357,39	0,919	1,616
-14	2,81	2,73	1.201,10	19,09	180,93	358,49	0,929	1,615
-12	3,08	3,00	1.194,10	20,46	183,61	359,58	0,939	1,614
-10	3,38	3,29	1.186,90	21,91	186,31	360,65	0,949	1,613
-8	3,69	3,60	1.179,70	23,44	189,01	361,71	0,960	1,612
-6	4,01	3,92	1.172,50	25,05	191,74	362,76	0,970	1,611
-4	4,35	4,26	1.165,10	26,76	194,48	363,80	0,980	1,610
-2	4,71	4,62	1.157,60	28,56	197,23	364,82	0,990	1,609
0	5,09	4,99	1.150,00	30,47	200,00	365,82	1,000	1,608
2	5,48	5,38	1.142,30	32,47	202,79	366,81	1,010	1,607
4	5,90	5,79	1.134,50	34,59	205,59	367,78	1,020	1,606
6	6,33	6,22	1.126,60	36,82	208,41	368,73	1,030	1,605
8	6,78	6,67	1.118,60	39,18	211,26	369,66	1,040	1,604
10	7,26	7,14	1.110,40	41,66	214,12	370,57	1,050	1,603
12	7,75	7,64	1.102,10	44,29	217,00	371,45	1,060	1,602
14	8,27	8,15	1.093,60	47,05	219,90	372,32	1,070	1,601
16	8,81	8,69	1.085,00	49,97	222,83	373,15	1,080	1,600
18	9,37	9,25	1.076,30	53,05	225,78	373,96	1,090	1,599
20	9,96	9,83	1.067,30	56,31	228,75	374,74	1,100	1,598
22	10,57	10,44	1.058,20	59,74	231,75	375,49	1,110	1,597
24	11,21	11,07	1.048,80	63,38	234,77	376,21	1,120	1,596
26	11,87	11,73	1.039,20	67,22	237,83	376,89	1,130	1,595
28	12,56	12,42	1.029,50	71,29	240,91	377,53	1,140	1,594
30	13,27	13,13	1.019,40	75,61	244,03	378,14	1,150	1,593
32	14,01	13,87	1.009,10	80,18	247,18	378,70	1,160	1,592
34	14,79	14,64	998,49	85,04	250,37	379,21	1,170	1,590
36	15,59	15,44	987,57	90,20	253,59	379,67	1,181	1,589
38	16,42	16,27	976,30	95,70	256,86	380,08	1,191	1,587
40	17,28	17,13	964,65	101,57	260,17	380,43	1,201	1,586
42	18,18	18,03	952,58	107,84	263,53	380,71	1,212	1,584
44	19,10	18,95	940,05	114,57	266,95	380,92	1,222	1,582
46	20,07	19,92	927,00	121,80	270,42	381,05	1,233	1,580
48	21,06	20,91	913,37	129,59	273,96	381,08	1,243	1,577
50	22,09	21,94	899,07	138,04	277,57	381,01	1,254	1,575
52	23,16	23,01	884,02	147,22	281,27	380,82	1,265	1,572
54	24,27	24,12	868,07	157,28	285,06	380,50	1,277	1,569
56	25,42	25,27	851,09	168,36	288,96	380,01	1,288	1,565
58	26,61	26,46	832,83	180,69	292,99	379,32	1,300	1,561
60	27,84	27,70	813,01	194,57	297,18	378,40	1,312	1,556
62	29,11	28,98	791,18	210,43	301,58	377,16	1,325	1,550
64	30,43	30,31	766,64	228,99	306,24	375,51	1,338	1,544
66	31,81	31,69	738,18	251,43	311,30	373,27	1,353	1,535
68	33,23	33,13	703,33	280,19	316,98	370,09	1,369	1,524
70	34,71	34,63	655,33	321,83	323,96	365,04	1,388	1,508