

Low and medium temperature commercial refrigeration

KrioNext® 507 is a refrigerant gas composed of HFC-125 and HFC-143a. It has been developed by Honeywell as a long-term replacement product for R-502.

KrioNext® 507 is a non polluting azeotropic mixture. It does not damage the ozone layer. It is an excellent product for the use in low and medium temperature.



Physical Properties	UM	Kryon® 507
Composition	% by weight	R-125 - 50 % R-143a - 50 %
Environmental Classification	-	HFC
Molecular Weight	gr/grmole	98,86
Saturated Vapour Temperature @ 1,013 bar	°C	-46,47
Temperature Glide @ 1,013 bar	K	0,00
Density of Liquid @ 25°C	kg/m³	1.047,90
Density of Saturated Vapour @ 1,013 bar	kg/m³	5,65
Pressure of Saturation (Saturated Liquid) @ 25°C	bar_rel	11,81
Pressure of Saturation (Saturated Liquid) @ 50°C	bar_rel	22,60
Critical Temperature	°C	70,61
Critical Pressure	bar_rel	36,04
Critical Density	kg/m³	490,74
Heat of Evaporation @ 1,013 bar	kJ/Kg	196,70
Specific Entropy of Liquid @ 25°C	kJ/Kg*°C	1,12
Specific Entropy of Vapour @ 25°C	kJ/Kg*°C	1,58
CP/CV Ratio @ 25°C - 1,013 bar_ass		1,11
ODP	(R11 = 1)	0,00
Atmosferic Life Time	Anni	40,50
GWP - IPCC rev. 4 (IPCC rev. 5)	(CO ₂ = 1)	3985 (3985)
ASHRAE Standard 34 Safety Rating		A1
Lower Flammability Limit	%	Non-flammable
Classification according to Directive 97/23/CE PED	Group	2

Applications

KrioNext® 507 is used for a wide range of applications in low and medium temperature commercial refrigeration, including supermarket counter fridge, refrigerated transport, stand and ice maker machine.

Performance

- ✓ Kryon® 507 is suitable for both new plants and for converting existing systems designed to use R-502.
- ✓ Changes in the project to optimize the performance are minimal.

Recommended Lubricants

Il KrioNext® 507 needs the use of mixable lubricants such as Polyol Esters (POE).

Most of the producers recommend specific POE lubricants. Therefore, the user should check which lubricant is recommended by the producer.

KrioNext® 507 | R-507



Industrial Refrigeration



Commercial Refrigeration



Refrigerated Transports

TEMPERATURE RANGE



Zero ODP



High GWP

3985 (3985)
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	-0,15	-0,15	1.326,90	4,81	135,03	334,05	0,740	1,631
-48	-0,06	-0,06	1.320,70	5,27	137,51	335,25	0,751	1,629
-46	0,04	0,04	1.314,50	5,78	139,99	336,45	0,761	1,626
-44	0,14	0,14	1.308,20	6,31	142,48	337,65	0,772	1,624
-42	0,25	0,25	1.301,90	6,89	144,99	338,84	0,783	1,622
-40	0,37	0,37	1.295,60	7,51	147,49	340,03	0,794	1,620
-38	0,50	0,50	1.289,20	8,17	150,01	341,21	0,805	1,618
-36	0,64	0,64	1.282,80	8,87	152,54	342,38	0,815	1,616
-34	0,79	0,79	1.276,30	9,63	155,08	343,55	0,826	1,614
-32	0,95	0,95	1.269,70	10,43	157,63	344,72	0,837	1,612
-30	1,12	1,12	1.263,20	11,28	160,18	345,88	0,847	1,611
-28	1,30	1,29	1.256,50	12,19	162,75	347,03	0,857	1,609
-26	1,49	1,49	1.249,80	13,15	165,33	348,17	0,868	1,608
-24	1,69	1,69	1.243,10	14,17	167,92	349,30	0,878	1,606
-22	1,90	1,90	1.236,30	15,26	170,52	350,43	0,889	1,605
-20	2,13	2,13	1.229,40	16,41	173,13	351,54	0,899	1,604
-18	2,37	2,37	1.222,50	17,63	175,76	352,65	0,909	1,602
-16	2,63	2,63	1.215,40	18,92	178,39	353,75	0,919	1,601
-14	2,90	2,90	1.208,40	20,28	181,04	354,83	0,930	1,600
-12	3,18	3,18	1.201,20	21,72	183,71	355,91	0,940	1,599
-10	3,48	3,48	1.193,90	23,25	186,39	356,97	0,950	1,598
-8	3,80	3,80	1.186,60	24,86	189,08	358,02	0,960	1,597
-6	4,13	4,13	1.179,20	26,56	191,78	359,06	0,970	1,596
-4	4,48	4,48	1.171,70	28,36	194,51	360,08	0,980	1,595
-2	4,85	4,84	1.164,00	30,25	197,25	361,08	0,990	1,594
0	5,23	5,23	1.156,30	32,25	200,00	362,07	1,000	1,593
2	5,63	5,63	1.148,50	34,36	202,77	363,05	1,010	1,593
4	6,06	6,05	1.140,50	36,59	205,56	364,00	1,020	1,592
6	6,50	6,49	1.132,40	38,94	208,37	364,94	1,030	1,591
8	6,96	6,96	1.124,20	41,41	211,20	365,85	1,040	1,590
10	7,45	7,44	1.115,90	44,03	214,04	366,75	1,050	1,589
12	7,95	7,95	1.107,40	46,78	216,91	367,61	1,060	1,588
14	8,48	8,47	1.098,70	49,69	219,80	368,46	1,070	1,587
16	9,03	9,02	1.089,90	52,76	222,71	369,28	1,080	1,587
18	9,61	9,60	1.080,90	56,01	225,65	370,07	1,090	1,586
20	10,21	10,20	1.071,70	59,44	228,61	370,83	1,100	1,585
22	10,83	10,82	1.062,40	63,06	231,60	371,55	1,109	1,584
24	11,48	11,47	1.052,80	66,89	234,61	372,25	1,119	1,583
26	12,15	12,14	1.043,00	70,94	237,66	372,91	1,129	1,582
28	12,86	12,84	1.032,90	75,24	240,73	373,52	1,139	1,580
30	13,59	13,57	1.022,60	79,80	243,84	374,10	1,150	1,579
32	14,35	14,33	1.011,90	84,63	246,98	374,63	1,160	1,578
34	15,13	15,12	1.001,00	89,77	250,16	375,11	1,170	1,577
36	15,95	15,94	989,73	95,24	253,39	375,54	1,180	1,575
38	16,80	16,79	978,09	101,08	256,65	375,91	1,190	1,573
40	17,68	17,67	966,03	107,32	259,96	376,22	1,200	1,572
42	18,60	18,58	953,52	114,00	263,33	376,46	1,211	1,570
44	19,54	19,53	940,50	121,17	266,74	376,61	1,221	1,568
46	20,53	20,51	926,91	128,91	270,23	376,68	1,232	1,566
48	21,54	21,53	912,68	137,27	273,78	376,66	1,243	1,563
50	22,60	22,58	897,71	146,36	277,41	376,52	1,254	1,560
52	23,69	23,67	881,88	156,29	281,13	376,25	1,265	1,557
54	24,82	24,81	865,05	167,21	284,95	375,82	1,276	1,554
56	26,00	25,98	847,02	179,34	288,90	375,21	1,288	1,550
58	27,21	27,19	827,50	192,94	293,00	374,38	1,300	1,545
60	28,47	28,45	806,09	208,43	297,28	373,26	1,312	1,540
62	29,78	29,76	782,18	226,43	301,81	371,76	1,325	1,534
64	31,14	31,12	754,73	247,99	306,68	369,73	1,339	1,526
66	32,55	32,53	721,72	275,14	312,08	366,88	1,355	1,516
68	34,01	34,00	678,14	312,90	318,50	362,52	1,373	1,502
70	35,55	35,54	599,65	385,06	328,32	353,47	1,401	1,474