



TECHNICAL DATA SHEET

R-448A

Components

Chemical Name	Chemical Formula	%By weight	CAS No
1,1,1,2-Tetrafluoroethane (R-134a)	CH ₂ FCF ₃	21,0	811-97-2
2,3,3,3-Tetrafluoropropene (R-1234yf)	CH ₂ =CF ₃	20,0	754-12-1
Pentafluoroethane (R-125)	C ₂ HF ₅	26,0	354-33-6
Difluoromethane (R-32)	CH ₂ F ₂	26,0	75-10-5
Trans-1,3,3,3-Tetrafluoroprop-1ene (R-1234ze)	C ₃ H ₂ F ₄	7,0	29118-24-9

Physical and chemical properties

At normal temperature and pressure, R-448A is a colourless gas.

Physical state.....	Gas
Form.....	Compressed liquefied gas
Molecular Weight (g/mol).....	86.3
Boiling Point at 1 atm, (°C).....	-45.9
Vapor pressure 25°C, (bar).....	11.07
Liquid Density at 25°C, (kg/m ³).....	1092.3
Heat of vaporization at boiling point, kJ/kg.....	241.1
Sliding temperature or or glide, K.....	~4
Flammability (solid, gas).....	No
Critical Temperature, °C.....	83.7
Critical Pressure, bar.....	46.6
Critical Density, (kg/m ³).....	480.20
ODP.....	0
GWP.....	1387*

Commercial Specifications (ISO9002)

Purity, %, min.....	99.5
Moisture content, ppm by weight.....	10
Acid Value, ppm by weight.....	0.1
Residue, mg.kg.....	100

*The regulation on fluorinated greenhouse gases of EU 517-2014 has been taken considered.



Thermodynamic Properties

TEMP. (°C)	ABSOLUTE PRESSURE (bar)		DENSITY (Kg/dm ³)		ENTHALPY (kJ/Kg)		ENTROPY (kJ/Kg.K)	
	LIQUID	VAPOUR	LIQUID	VAPOUR	LIQUID	VAPOUR	LIQUID	VAPOUR
-50	0,77	0,56	1359,90	2,72	132,84	375,34	0,730	1,833
-46	0,94	0,69	1348,00	3,33	137,99	377,75	0,753	1,824
-42	1,15	0,85	1335,90	4,03	143,18	380,14	0,776	1,816
-38	1,38	1,04	1323,80	4,85	148,40	382,51	0,798	1,808
-34	1,65	1,26	1311,40	5,79	153,65	384,86	0,820	1,800
-30	1,96	1,51	1298,90	6,87	158,94	387,18	0,842	1,793
-26	2,31	1,80	1286,30	8,10	164,27	389,46	0,864	1,787
-22	2,71	2,13	1273,40	9,50	169,63	391,72	0,885	1,781
-18	3,15	2,50	1260,30	11,09	175,05	393,93	0,906	1,775
-14	3,66	2,93	1247,00	12,88	180,50	396,10	0,927	1,770
-10	4,22	3,41	1233,40	14,89	186,01	398,23	0,948	1,765
-6	4,84	3,94	1219,60	17,15	191,56	400,31	0,969	1,760
-2	5,53	4,54	1205,50	19,67	197,17	402,33	0,990	1,755
2	6,29	5,21	1191,00	22,49	202,84	404,30	1,010	1,751
6	7,13	5,95	1176,20	25,63	208,57	406,20	1,031	1,747
10	8,04	6,76	1161,00	29,13	214,37	408,02	1,051	1,743
14	9,05	7,66	1145,40	33,02	220,24	409,77	1,071	1,739
18	10,14	8,64	1129,30	37,34	226,19	411,43	1,092	1,735
22	11,33	9,72	1112,70	42,14	232,22	412,99	1,112	1,731
26	12,61	10,89	1095,60	47,48	238,34	414,44	1,132	1,727
30	14,01	12,18	1077,80	53,42	244,56	415,76	1,152	1,723
34	15,51	13,57	1059,20	60,04	250,88	416,95	1,172	1,719
38	17,12	15,08	1039,90	67,43	257,33	417,99	1,193	1,714
42	18,86	16,72	1019,50	75,71	263,91	418,84	1,213	1,710
46	20,73	18,49	998,15	85,02	270,64	419,50	1,234	1,705
50	22,72	20,41	975,44	95,54	277,55	419,91	1,255	1,699