R-407F pressure–temperature chart

Performax LT (R-32/125/134a) — a zeotropic blend of R-32, R-125 and R-134a, 30 / 30 / 40 % by mass. Also written R407F. Bubble and dew pressures from −70 to 76 °C, every 2 K, in kPa gauge and bar gauge, computed with CoolProp.

SAFETY CLASS	GWP, 100-YEAR	ODP
A1 Lower toxicity, no flame propagation	**1,825** (AR4) · **1,965** (AR6) IPCC, summed from its composition	**0** Montreal Protocol

BUBBLE POINT	DEW POINT	GLIDE
−46.06 °C At 101.325 kPa	**−39.66** °C At 101.325 kPa	**6.40** K Dew less bubble, at 101.325 kPa

	BUBBLE · LIQUID		DEW · VAPOUR	
T (°C)	kPa g	bar g	kPa g	bar g
−70	−74.6	−0.75	−84.3	−0.84
−68	−71.0	−0.71	−81.8	−0.82
−66	−67.0	−0.67	−79.0	−0.79
−64	−62.7	−0.63	−75.9	−0.76
−62	−57.9	−0.58	−72.4	−0.72
−60	−52.6	−0.53	−68.6	−0.69
−58	−46.9	−0.47	−64.3	−0.64
−56	−40.6	−0.41	−59.6	−0.60
−54	−33.7	−0.34	−54.4	−0.54
−52	−26.2	−0.26	−48.7	−0.49
−50	−18.1	−0.18	−42.4	−0.42
−48	−9.3	−0.09	−35.6	−0.36
−46	0.3	0.00	−28.2	−0.28
−44	10.6	0.11	−20.0	−0.20
−42	21.7	0.22	−11.2	−0.11
−40	33.7	0.34	−1.7	−0.02
−38	46.6	0.47	8.6	0.09
−36	60.4	0.60	19.8	0.20
−34	75.2	0.75	31.9	0.32
−32	91.0	0.91	44.8	0.45
−30	108.0	1.08	58.8	0.59
−28	126.0	1.26	73.7	0.74
−26	145.3	1.45	89.8	0.90
−24	165.8	1.66	106.9	1.07
−22	187.5	1.88	125.3	1.25
−20	210.6	2.11	144.8	1.45
−18	235.2	2.35	165.7	1.66
−16	261.1	2.61	187.9	1.88
−14	288.6	2.89	211.5	2.11
−12	317.6	3.18	236.5	2.37
−10	348.2	3.48	263.1	2.63
−8	380.6	3.81	291.3	2.91
−6	414.6	4.15	321.1	3.21
−4	450.4	4.50	352.5	3.53
−2	488.1	4.88	385.8	3.86
0	527.7	5.28	420.9	4.21
2	569.3	5.69	457.9	4.58
4	612.9	6.13	496.8	4.97
6	658.6	6.59	537.8	5.38
8	706.5	7.06	580.9	5.81
10	756.6	7.57	626.1	6.26
12	809.0	8.09	673.6	6.74
14	863.7	8.64	723.4	7.23
16	920.8	9.21	775.7	7.76
18	980.5	9.80	830.3	8.30
20	1,042.6	10.43	887.5	8.88
22	1,107.4	11.07	947.4	9.47
24	1,174.9	11.75	1,009.9	10.10
26	1,245.2	12.45	1,075.2	10.75
28	1,318.2	13.18	1,143.4	11.43
30	1,394.2	13.94	1,214.6	12.15
32	1,473.2	14.73	1,288.8	12.89
34	1,555.1	15.55	1,366.1	13.66
36	1,640.2	16.40	1,446.7	14.47
38	1,728.5	17.29	1,530.6	15.31
40	1,820.1	18.20	1,618.0	16.18
42	1,915.0	19.15	1,708.8	17.09
44	2,013.3	20.13	1,803.3	18.03
46	2,115.2	21.15	1,901.6	19.02
48	2,220.6	22.21	2,003.8	20.04
50–58 °C: not solved by CoolProp — left out, not interpolated				
60	2,933.2	29.33	2,705.6	27.06
62	3,066.2	30.66	2,838.9	28.39
64	3,203.5	32.04	2,977.5	29.77
66	3,345.2	33.45	3,121.4	31.21
68	3,491.3	34.91	3,271.1	32.71
70	3,642.0	36.42	3,426.9	34.27
72	3,797.3	37.97	3,589.2	35.89
74	3,957.2	39.57	3,758.6	37.59
76	4,121.4	41.21	3,936.0	39.36

NOTES

Gauge pressure is absolute pressure less a standard atmosphere, 101.325 kPa; below it, gauge pressure is negative.
Bubble: saturated liquid — read subcooling from it. Dew: saturated vapour — read superheat from it.
CoolProp could not solve the bubble line at 50–58 °C, or the dew line at 78–80 °C. Those rows are left out, not interpolated.

SOURCES

Computed with CoolProp 7.2.1dev (HEOS backend, MIT licence), from published equations of state.
Cite: Bell, I.H., Wronski, J., Quoilin, S., Lemort, V. (2014). Pure and pseudo-pure fluid thermophysical property evaluation and the open-source thermophysical property library CoolProp. Ind. Eng. Chem. Res. 53(6), 2498-2508.
GWP, ODP, safety class and composition: UNEP RTOC 2018, DCCEEW (Australian Government), IPCC AR4 (2007), IPCC AR6 (2021), Montreal Protocol, ASHRAE refrigerant designations, GHG Protocol (2024).

ONLINE

kelvin.engineering/refrigerants/r-407f — this table in kPa absolute, and the P–h diagram
kelvin.engineering/tools/superheat-subcooling?r=r-407f — superheat and subcooling calculator

VERIFY

These figures must be verified by a qualified professional before they're relied on.