

R-600a pressure–temperature chart

Isobutane — a natural refrigerant. Also written R600a. Saturation pressure from –70 to 132 °C, every 2 K, in kPa gauge and bar gauge, computed with CoolProp.

SAFETY CLASS

A3 Lower toxicity, higher flammability	GWP, 100-YEAR under 5 Australian Government (DCCEEW)	ODP 0 Montreal Protocol
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CRITICAL POINT

134.66 °C · 3,629.0 kPa abs
CoolProp, from its equation of state

NORMAL BOILING POINT

–11.75 °C
At 101.325 kPa

SATURATION PRESSURE			SATURATION PRESSURE			SATURATION PRESSURE		
T (°C)	kPa g	bar g	T (°C)	kPa g	bar g	T (°C)	kPa g	bar g
–70	–96.5	–0.97	–2	44.8	0.45	66	894.5	8.95
–68	–95.8	–0.96	0	55.6	0.56	68	939.6	9.40
–66	–95.0	–0.95	2	67.1	0.67	70	986.2	9.86
–64	–94.2	–0.94	4	79.1	0.79	72	1,034.3	10.34
–62	–93.2	–0.93	6	91.8	0.92	74	1,083.9	10.84
–60	–92.1	–0.92	8	105.2	1.05	76	1,135.2	11.35
–58	–90.8	–0.91	10	119.3	1.19	78	1,188.0	11.88
–56	–89.5	–0.89	12	134.1	1.34	80	1,242.5	12.42
–54	–88.0	–0.88	14	149.6	1.50	82	1,298.6	12.99
–52	–86.3	–0.86	16	165.9	1.66	84	1,356.5	13.56
–50	–84.5	–0.85	18	183.0	1.83	86	1,416.1	14.16
–48	–82.5	–0.83	20	200.9	2.01	88	1,477.4	14.77
–46	–80.4	–0.80	22	219.6	2.20	90	1,540.6	15.41
–44	–78.0	–0.78	24	239.2	2.39	92	1,605.7	16.06
–42	–75.4	–0.75	26	259.7	2.60	94	1,672.6	16.73
–40	–72.6	–0.73	28	281.1	2.81	96	1,741.5	17.41
–38	–69.6	–0.70	30	303.4	3.03	98	1,812.3	18.12
–36	–66.3	–0.66	32	326.7	3.27	100	1,885.2	18.85
–34	–62.7	–0.63	34	350.9	3.51	102	1,960.1	19.60
–32	–58.9	–0.59	36	376.2	3.76	104	2,037.1	20.37
–30	–54.7	–0.55	38	402.5	4.03	106	2,116.3	21.16
–28	–50.2	–0.50	40	429.9	4.30	108	2,197.7	21.98
–26	–45.4	–0.45	42	458.3	4.58	110	2,281.3	22.81
–24	–40.3	–0.40	44	487.9	4.88	112	2,367.2	23.67
–22	–34.8	–0.35	46	518.6	5.19	114	2,455.5	24.56
–20	–28.8	–0.29	48	550.5	5.50	116	2,546.3	25.46
–18	–22.5	–0.23	50	583.6	5.84	118	2,639.5	26.39
–16	–15.8	–0.16	52	617.9	6.18	120	2,735.3	27.35
–14	–8.6	–0.09	54	653.4	6.53	122	2,833.8	28.34
–12	–1.0	–0.01	56	690.2	6.90	124	2,935.0	29.35
–10	7.1	0.07	58	728.4	7.28	126	3,039.1	30.39
–8	15.7	0.16	60	767.8	7.68	128	3,146.2	31.46
–6	24.9	0.25	62	808.7	8.09	130	3,256.5	32.56
–4	34.6	0.35	64	850.9	8.51	132	3,370.2	33.70

NOTES Gauge pressure is absolute pressure less a standard atmosphere, 101.325 kPa; below it, gauge pressure is negative.

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 and safety class: UNEP RTOC 2018, DCCEEW (Australian Government), IPCC AR4 (2007), IPCC AR6 (2021), Montreal Protocol.

ONLINE kelvin.engineering/refrigerants/r-600a — this table in kPa absolute, and the P–h diagram
kelvin.engineering/tools/superheat-subcooling?r=r-600a — superheat and subcooling calculator

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