



R-600a

TECHNICAL DATA SHEET

Components

Chemical Name	Chemical Formula	%By weight	CAS No	EC No
Isobutane (R-600a)	C ₄ H ₁₀	% 100	75-28-5	200-857-2

Physical and chemical properties

At normal temperature and pressure, R-600a is a colourless gas.

Physical state.....	Gas
Form.....	Compressed liquefied gas
Molecular Weight (g/mol).....	58.12
Boiling Point at 1 atm, (°C)	-11.7
Vapor pressure 21°C, (atm).....	3.1
Density at 20°C, (g/cm ³)	0.557
Viscosity -10°C (cP)	0.238
Solubility in water 25°C (mg/L)	48.9
Critical Temperature, °C.....	134.69
Critical Pressure, bar.....	36.45
ODP.....	0
GWP.....	3*

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/m ³)		ENTHALPY (kJ/Kg)		ENTROPY (kJ/Kg.K)	
		LIQUID	VAPOUR	LIQUID	VAPOUR	LIQUID	VAPOUR
-40	0.29	624.12	0.88	112.51	501.35	0.65	2.32
-35	0.37	618.89	1.10	123.04	507.85	0.70	2.32
-30	0.47	613.61	1.37	133.68	514.40	0.74	2.31
-25	0.58	608.27	1.69	144.43	520.99	0.79	2.30
-20	0.72	602.88	2.07	155.30	527.61	0.83	2.30
-15	0.89	597.41	2.51	166.29	534.26	0.87	2.30
-10	1.08	591.88	3.01	177.40	540.93	0.92	2.30
-5	1.31	586.27	3.59	188.63	547.63	0.96	2.30
0	1.57	580.58	4.26	200.00	554.34	1.00	2.30
5	1.87	574.80	5.01	211.50	561.06	1.04	2.30
10	2.21	568.92	5.87	223.15	567.78	1.08	2.30
15	2.59	562.95	6.83	234.94	574.50	1.12	2.30
20	3.02	556.86	7.91	246.88	581.21	1.16	2.31
25	3.51	550.65	9.13	258.98	587.90	1.21	2.31
30	4.05	544.31	10.48	271.24	594.57	1.25	2.31
35	4.65	537.83	11.99	283.67	601.21	1.29	2.32
40	5.31	531.19	13.67	296.28	607.80	1.33	2.32
45	6.04	524.37	15.53	309.07	614.34	1.37	2.33
50	6.85	517.37	17.60	322.06	620.82	1.41	2.33