



R-152a

TECHNICAL DATA SHEET

Components

Chemical Name	Chemical Formula	%By weight	CAS No	EC No
1,1- Difluoroethane (R-152a)	C ₂ H ₄ F ₂	% 100	75-37-6	200-866-1

Physical and chemical properties

At normal temperature and pressure, R152a is a colourless gas.

Physical state.....	Gas
Form.....	Compressed liquefied gas
Molecular Weight (g/mol).....	66.05
Freezing at 1,013 bar (°C).....	-117
Boiling Point at 1,013 bar (°C)	-24.7
Vapour pressure 25°C, (bar).....	5.08
Liquid Density at 25°C, (kg/m ³)	899
Heat Capacity of Liquid at 25°C,kJ/kgK.....	1.8
Heat Capacity of Vapour at 1 atm at 25°C, kJ/kgK.....	1.051
Solubility in water 25°C (g/l)	0.2
Upper/ Lower Flammability (%).....	16.9/ 3.9
Critical Temperature, °C.....	113.15
Critical Pressure, bar.....	44.96
ODP.....	0
GWP.....	124*

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)	
	LIQUID	VAPOUR	LIQUID	VAPOUR	LIQUID	VAPOUR
-30	0,77	0,77	1023,50	2,615	150,39	485,55
-25	0,97	0,97	1013,20	3,241	158,48	489,26
-20	1,21	1,21	1002,70	3,979	166,64	492,94
-15	1,49	1,49	992,09	4,844	174,86	496,57
-10	1,82	1,82	981,28	5,852	183,16	500,15
-5	2,20	2,20	970,30	7,017	191,54	503,66
0	2,64	2,64	959,11	8,359	200,00	507,11
5	3,15	3,15	947,71	9,896	208,55	510,49
10	3,73	3,73	936,07	11,651	217,19	513,78
15	4,39	4,39	924,17	13,647	225,93	516,99
20	5,13	5,13	911,97	15,909	234,77	520,09
25	5,96	5,96	899,47	18,469	243,73	523,09
30	6,90	6,90	886,61	21,357	252,80	525,96
35	7,94	7,94	873,36	24,613	262,01	528,70
40	9,09	9,09	859,67	28,280	271,35	531,28
45	10,37	10,37	845,50	32,408	280,84	533,70
50	11,77	11,77	830,78	37,057	290,50	535,93
55	13,32	13,32	815,43	42,300	300,34	537,95
60	15,01	15,01	799,37	48,222	310,38	539,72
65	16,85	16,85	782,48	54,932	320,64	541,21



Mollier Diagram

