



## TECHNICAL DATA SHEET

# R-454C

### Components

Chemical Name	Chemical Formula	%By weight	CAS No	EC No
2,3,3,3-Tetrafluoropropene (R-1234yf)	CH <sub>2</sub> =CF <sub>2</sub> CF <sub>3</sub>	%78.5	754-12-1	468-710-7
Difluoromethane	CH <sub>2</sub> F <sub>2</sub>	%21.5	75-10-5	200-839-4

### Physical and chemical properties

At normal temperature and pressure, R-454C is a colourless gas.

Physical state.....	Gas
Form.....	Compressed liquefied gas
Molecular Weight (g/mol).....	90.78
Boiling Point at 1 atm, (°C).....	-45.9
Vapour pressure, (hPa).....	11.691
Liquid Density at 21.1°C, (kg/m <sup>3</sup> ).....	999.5
Solubility in water 24°C (mg/l).....	198.2
Ashrae Safety Class.....	A2L
Lower Flammable Limit, /kg/m <sup>3</sup> ).....	0.293
Critical Temperature, °C.....	85.7
Critical Pressure, bar.....	43.188
Critical Density, (kg/m <sup>3</sup> ).....	461.60
ODP.....	0
GWP.....	148*

### 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)		TEMP. (°C)	ABSOLUTE PRESSURE (bar)	
	LIQUID	VAPOUR		LIQUID	VAPOUR
-52	0.740	0.493	0	5.837	4.537
-50	0.817	0.549	2	6.212	4.850
-48	0.902	0.610	4	6.604	5.180
-46	0.992	0.677	6	7.014	5.526
-44	1.090	0.749	8	7.442	5.890
-42	1.195	0.826	10	7.890	6.271
-40	1.308	0.911	12	8.357	6.672
-38	1.429	1.002	14	8.844	7.091
-36	1.559	1.099	16	9.352	7.530
-34	1.698	1.205	18	9.881	7.990
-32	1.846	1.318	20	10.431	8.471
-30	2.003	1.439	22	11.003	8.973
-28	2.171	1.569	24	11.599	9.498
-26	2.350	1.708	26	12.217	10.045
-24	2.539	1.856	28	12.859	10.617
-22	2.740	2.014	30	13.525	11.213
-20	2.953	2.183	32	14.216	11.835
-18	3.178	2.362	34	14.933	12.484
-16	3.416	2.553	36	15.675	13.156
-14	3.668	2.755	38	16.444	13.858
-12	3.933	2.969	40	17.239	14.589
-10	4.212	3.196	42	18.062	15.349
-8	4.506	3.436	44	18.913	16.139
-6	4.815	3.689	46	19.793	16.961
-4	5.139	3.957	48	20.702	17.815
-2	5.480	4.239	50	21.640	18.702