



R-290

TECHNICAL DATA SHEET

Components

Chemical Name	Chemical Formula	%By weight	CAS No	EC No
Propane (R-290)	C ₃ H ₈	% 100	74-98-6	200-827-9

Physical and chemical properties

At normal temperature and pressure, R-290 is a colourless gas.

Physical state.....	Gas
Form.....	Compressed liquefied gas
Molecular Weight (g/mol).....	44.0
Boiling Point at 1 atm, (°C)	-42.1
Melting Point (°C)	-187.6
Vapor pressure 21°C, (atm).....	8.4
Density at 25°C, (g/cm ³)	0.493
Solubility in water 25°C (g/100ml)	0.007
Critical Temperature, °C.....	96.81
Critical Pressure, bar.....	42.48
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
-50	0,70	590,50	1,73	82,36	516,37	0,528	2,473
-45	0,89	584,80	2,14	93,49	522,36	0,577	2,457
-40	1,11	579,01	2,63	104,74	528,34	0,626	2,443
-35	1,37	573,13	3,20	116,12	534,30	0,674	2,430
-30	1,68	567,15	3,87	127,64	540,22	0,722	2,419
-25	2,03	561,06	4,63	139,30	546,10	0,769	2,408
-20	2,44	554,86	5,51	151,11	551,94	0,816	2,399
-15	2,92	548,54	6,51	163,07	557,73	0,862	2,391
-10	3,45	542,08	7,64	175,21	563,45	0,908	2,384
-5	4,06	535,47	8,92	187,51	569,10	0,954	2,377
0	4,75	528,71	10,36	200,00	574,67	1,000	2,372
5	5,51	521,79	11,98	212,68	580,15	1,046	2,367
10	6,37	514,68	13,80	225,56	585,51	1,091	2,362
15	7,32	507,37	15,83	238,66	590,75	1,136	2,358
20	8,37	499,85	18,11	251,98	595,85	1,181	2,354
25	9,52	492,08	20,65	265,53	600,78	1,226	2,351
30	10,79	484,05	23,48	279,35	605,53	1,271	2,347
35	12,18	475,73	26,65	293,43	610,06	1,316	2,344
40	13,70	467,07	30,20	307,82	614,33	1,362	2,340
45	15,34	458,03	34,19	322,52	618,30	1,407	2,337
50	17,13	448,53	38,67	337,59	621,92	1,453	2,333