



R-125

TECHNICAL DATA SHEET

Components

| Chemical Name | Chemical Formula | %By weight | CAS No | EC No |
|---------------------------|--------------------------------|------------|----------|-----------|
| Pentafluoroethane (R-125) | C ₂ HF ₅ | % 100 | 354-33-6 | 206-557-8 |

Physical and chemical properties

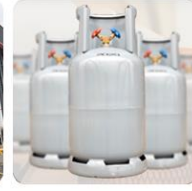
At normal temperature and pressure, R-125 is a colourless gas.

| | |
|--|--------------------------|
| Physical state..... | Gas |
| Form..... | Compressed liquefied gas |
| Molecular Weight (g/mol)..... | 120.02 |
| Boiling Point (°C) | -48.5 |
| Melting Point (°C) | -103.0 |
| Liquid Density at 20°C, (g/cm ³) | 1.23 |
| Solubility in water 25°C (mg/L) | 923 |
| Flammability (solid, gas)..... | None |
| Critical Temperature, °C..... | 66.3 |
| Critical Pressure, atm..... | 34.7 |
| Critical Density, kg/m ³ | 573.58 |
| ODP..... | 0 |
| GWP..... | 3500* |

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 | 1.5050 | 0.674 | 101.216 | 154.41 | 311.51 | 0.8212 | 1.495 |
| -35 | 1.8704 | 0.682 | 82.401 | 159.90 | 314.35 | 0.8444 | 1.493 |
| -30 | 2.3011 | 0.691 | 67.665 | 165.43 | 317.17 | 0.8673 | 1.491 |
| -25 | 2.8047 | 0.701 | 55.999 | 171.01 | 319.96 | 0.8898 | 1.490 |
| -20 | 3.3892 | 0.711 | 46.673 | 176.64 | 322.71 | 0.9122 | 1.489 |
| -15 | 4.0630 | 0.721 | 39.146 | 182.43 | 325.42 | 0.9343 | 1.488 |
| -10 | 4.8346 | 0.733 | 33.019 | 188.13 | 328.08 | 0.9562 | 1.488 |
| -5 | 5.7134 | 0.745 | 27.991 | 194.01 | 330.69 | 0.9781 | 1.487 |
| 0 | 6.7087 | 0.757 | 23.832 | 200.00 | 333.22 | 1.0000 | 1.487 |
| 5 | 7.8305 | 0.771 | 20.367 | 206.13 | 335.68 | 1.0219 | 1.487 |
| 10 | 9.0890 | 0.786 | 17.460 | 212.42 | 338.04 | 1.0440 | 1.487 |
| 15 | 10.4950 | 0.802 | 15.004 | 218.88 | 340.29 | 1.0662 | 1.487 |
| 20 | 12.0597 | 0.820 | 12.915 | 223.56 | 342.41 | 1.0888 | 1.487 |
| 25 | 13.7945 | 0.840 | 11.127 | 232.48 | 344.36 | 1.1117 | 1.486 |
| 30 | 15.7114 | 0.862 | 9.586 | 239.69 | 346.12 | 1.1351 | 1.486 |
| 35 | 17.8230 | 0.888 | 8.247 | 247.24 | 347.62 | 1.1592 | 1.484 |
| 40 | 20.1421 | 0.918 | 7.074 | 255.19 | 348.79 | 1.1841 | 1.483 |
| 45 | 22.6824 | 0.953 | 6.036 | 263.64 | 349.52 | 1.2102 | 1.480 |
| 50 | 25.4583 | 0.998 | 5.102 | 272.75 | 349.63 | 1.2377 | 1.475 |