



R-236fa

TECHNICAL DATA SHEET

Components

| Chemical Name | Chemical Formula | %By weight | CAS No | EC No |
|---|--|------------|----------|-----------|
| 1,1,1,3,3,3-Hexafluoropropane (R-236fa) | C ₃ H ₂ F ₆ | %100 | 690-39-1 | 425-320-1 |

Physical and chemical properties

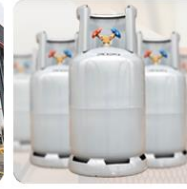
At normal temperature and pressure, R-236fa is a colourless gas.

| | |
|--|--------------------------|
| Physical state..... | Gas |
| Form..... | Compressed liquefied gas |
| Molecular Weight (g/mol)..... | 152.04 |
| Boiling Point at 1.013 bar(°C) | -1.44 |
| Melting Point (°C) | N/A |
| Vapour Pressure at 25°C, (bar) | 2.72 |
| Liquid Density at 25°C, (kg/m ³) | 1360 |
| Solubility in water 25°C (mg/L) | 724 |
| Liquid Viscosity 25°C, (10 ⁻³ Pa.s) | 0.286 |
| Flammability in air..... | None |
| Critical Temperature, °C..... | 124.92 |
| Critical Pressure, bar..... | 32 |
| Critical Density, kg/m ³ | 551.3 |
| ODP..... | 0 |
| GWP..... | 9810* |

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 | 0,076 | 1590,0 | 0,629 | 142,0 | 325,0 | 0,7662 | 1.5860 |
| -45 | 0,106 | 1575,0 | 0,857 | 147,6 | 328,4 | 0,7910 | 1.5830 |
| -40 | 0,145 | 1560,0 | 1,149 | 153,3 | 331,8 | 0,8154 | 1.5810 |
| -35 | 0,195 | 1546,0 | 1,517 | 158,9 | 335,2 | 0,8394 | 1.5800 |
| -30 | 0,258 | 1531,0 | 1,974 | 164,7 | 338,7 | 0,8632 | 1.5790 |
| -25 | 0,337 | 1516,0 | 2,537 | 170,4 | 342,2 | 0,8867 | 1.5790 |
| -20 | 0,435 | 1501,0 | 3,222 | 176,2 | 345,6 | 0,9098 | 1.5790 |
| -15 | 0,554 | 1486,0 | 4,046 | 182,1 | 349,1 | 0,9327 | 1.5800 |
| -10 | 0,698 | 1471,0 | 5,029 | 188,0 | 352,6 | 0,9554 | 1.5810 |
| -5 | 0,871 | 1456,0 | 6,193 | 194,0 | 356,1 | 0,9778 | 1.5820 |
| 0 | 1,076 | 1440,0 | 7,560 | 200,0 | 359,6 | 1,0000 | 1.5840 |
| 5 | 1,316 | 1425,0 | 9,155 | 206,1 | 363,1 | 1,0220 | 1.5860 |
| 10 | 1,597 | 1409,0 | 11,000 | 212,2 | 366,5 | 1,0440 | 1.5890 |
| 15 | 1,922 | 1393,0 | 13,140 | 218,4 | 370,0 | 1,0650 | 1.5910 |
| 20 | 2,296 | 1376,0 | 15,580 | 224,6 | 373,4 | 1,0870 | 1.5940 |
| 25 | 2,724 | 1360,0 | 18,380 | 230,9 | 376,8 | 1,1080 | 1.5970 |
| 30 | 3,210 | 1343,0 | 21,570 | 237,3 | 380,2 | 1,1290 | 1.6000 |
| 35 | 3,760 | 1325,0 | 25,190 | 243,7 | 383,6 | 1,1500 | 1.6040 |
| 40 | 4,378 | 1308,0 | 29,300 | 250,2 | 386,9 | 1,1710 | 1.6070 |
| 45 | 5,070 | 1289,0 | 33,950 | 256,8 | 390,2 | 1,1910 | 1.6100 |
| 50 | 5,842 | 1270,0 | 39,210 | 263,4 | 393,4 | 1,2120 | 1.6140 |
| 55 | 6,699 | 1251,0 | 45,150 | 270,2 | 396,5 | 1,2320 | 1.6170 |
| 60 | 7,647 | 1230,0 | 51,870 | 277,0 | 399,6 | 1,2530 | 1.6210 |
| 65 | 8,694 | 1209,0 | 59,490 | 283,9 | 402,6 | 1,2730 | 1.6240 |
| 70 | 9,845 | 1187,0 | 68,150 | 290,9 | 405,4 | 1,2930 | 1.6270 |
| 75 | 11,110 | 1163,0 | 78,020 | 298,1 | 408,1 | 1,3140 | 1.6300 |
| 80 | 12,490 | 1138,0 | 89,330 | 305,4 | 410,7 | 1,3340 | 1.6320 |
| 85 | 14,000 | 1111,0 | 102,400 | 312,8 | 413,0 | 1,3550 | 1.6340 |
| 90 | 15,650 | 1081,0 | 117,600 | 320,5 | 415,1 | 1,3760 | 1.6360 |
| 95 | 17,440 | 1049,0 | 135,600 | 328,4 | 416,9 | 1,3970 | 1.6370 |
| 100 | 19,400 | 1013,0 | 157,100 | 336,5 | 418,2 | 1,4180 | 1.6370 |