

Zephex[®] 134a physical properties

| Property | Units | Data |
|--|---|-----------------------------------|
| Chemical Name | — | 1,1,1,2-Tetrafluoroethane |
| Chemical Formula | — | CF ₃ CH ₂ F |
| Molecular Weight | — | 102.03 |
| Boiling Point at 1 atm (1.013 bar) | °C °F | -26.09 -14.9 |
| Melting Point | °C °F | -103.0 -153.4 |
| Critical Temperature | °C °F | 101.03 213.9 |
| Critical Pressure | bara lb/in ² abs | 40.56 588.3 |
| Critical Volume | m ³ /kg ft ³ /lb | 1.97 x 10 ⁻³ 0.0316 |
| Critical Density | kg/m ³ lb/ft ³ | 507.6 31.65 |
| Liquid Density at 25°C(77°F) | m ³ /kg ft ³ /lb | 1206.8 75.34 |
| Vapour Density at 25°C(77°F) | kg/m ³ lb/ft ³ | 52.34 3.264 |
| Saturated Vapour Density at nBpt | m ³ /kg ft ³ /lb | 5.26 0.328 |
| Liquid Cp at 25°C(77°F) | kJ/kg.K Btu/lb.°F | 1.43 0.344 |
| Vapour Pressure at 25°C(77°F) | bara | 6.653 |
| Latent Heat of Vaporisation at nBpt | kJ/kg Btu/lb | 216.7 93.2 |
| Liquid Thermal Conductivity at 25°C(77°F) | W/m.K Btu/hr.ft°F | 0.0824 0.0476 |
| Vapour Thermal Conductivity at 25°C(77°F) and 1 atm (1.013 bar) | W/m.K Btu/hr.ft°F | 0.0144 0.00836 |
| Liquid Viscosity at 25°C(77°F) | cP | 0.199 |
| Vapour Viscosity at 25°C(77°F) and 1 atm(1.013 bar) | cP | 0.013 |
| Coefficient of thermal expansion | °C | 0.002766 |
| Solubility of 134a in Water at 20°C (68°F) and 1 atm (1.013 bar) | %w/w | 0.0773 |
| Solubility of Water in HFA-134a at 25°C(77°F) and 1 atm(1.013 bar) | %w/w | 0.11 |
| Flammability Limits in Air at 1 atm (1.013 bar) | %v/v | none |
| | °C | 770 |

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| Autoignition Temperature | °F | 1418 |
| Liquid Dielectric Constant at 20°C | – | 9.51 |
| Vapour Dielectric Constant at 25°C(77°F) and 1 atm (1.013 bar) | – | 1.014 |
| Dielectric Strength (R12 = 1) | – | 0.5 |
| Dipole Moment | D | 2.06 |
| Thermal Conductivity at 25 °C | W/mK | 0.082 |
| Surface Tension at 25 °C | mN/m | 8.09 |
| Toxicity AEL (8- and 12-hr TWA) | ppm(v/v) | 1000 |
| TSCA Inventory Status | – | Included |
| EINECS Inventory Status | – | Included |