# Benzene, 1,2,4,5-tetrafluoro-3,6-bis(trifluoromethyl)-

**Other names:** Decafluoro-p-xylol
**Inchi:** InChI=1S/C8F10/c9-3-1(7(13,14)15)4(10)6(12)2(5(3)11)8(16,17)18
**InchiKey:** WWZNHODBHBVRID-UHFFFAOYSA-N
**Formula:** C8F10
**SMILES:** Fc1c(F)c(C(F)(F)F)c(F)c(F)c1C(F)(F)F
**Mol. weight [g/mol]:** 286.07
**CAS:** 651-89-8

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | -1861.68 | kJ/mol | Joback Method |
| hf | -2007.87 | kJ/mol | Joback Method |
| hfus | 24.54 | kJ/mol | Joback Method |
| hvap | 28.23 | kJ/mol | Joback Method |
| ie | 9.90 | eV | NIST Webbook |
| log10ws | -5.01 | | Crippen Method |
| logp | 4.281 | | Crippen Method |
| mcvol | 117.520 | ml/mol | McGowan Method |
| pc | 2179.52 | kPa | Joback Method |
| rinpol | 636.10 | | NIST Webbook |
| rinpol | 636.10 | | NIST Webbook |
| tb | 420.26 | K | Joback Method |
| tc | 565.89 | K | Joback Method |
| tf | 279.68 | K | Joback Method |
| vc | 0.533 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 268.40 | J/mol×K | 420.26 | Joback Method |
| cpg | 276.38 | J/mol×K | 444.53 | Joback Method |
| cpg | 283.93 | J/mol×K | 468.80 | Joback Method |
| cpg | 291.06 | J/mol×K | 493.07 | Joback Method |
| cpg | 297.79 | J/mol×K | 517.34 | Joback Method |

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|---|---|---|---|---|
| cpg | 304.13 | J/mol×K | 541.61 | Joback Method |
| cpg | 310.09 | J/mol×K | 565.89 | Joback Method |

# Sources

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|---|---|
| **Joback Method:** | https://en.wikipedia.org/wiki/Joback_method |
| **McGowan Method:** | http://link.springer.com/article/10.1007/BF02311772 |
| **NIST Webbook:** | http://webbook.nist.gov/cgi/cbook.cgi?ID=C651898&Units=SI |
| **Crippen Method:** | http://pubs.acs.org/doi/abs/10.1021/ci990307l |
| **Crippen Method:** | https://www.chemeo.com/doc/models/crippen_log10ws |

# Legend

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|---|---|
| **cpg:** | Ideal gas heat capacity |
| **gf:** | Standard Gibbs free energy of formation |
| **hf:** | Enthalpy of formation at standard conditions |
| **hfus:** | Enthalpy of fusion at standard conditions |
| **hvap:** | Enthalpy of vaporization at standard conditions |
| **ie:** | Ionization energy |
| **log10ws:** | Log10 of Water solubility in mol/l |
| **logp:** | Octanol/Water partition coefficient |
| **mcvol:** | McGowan's characteristic volume |
| **pc:** | Critical Pressure |
| **rinpol:** | Non-polar retention indices |
| **tb:** | Normal Boiling Point Temperature |
| **tc:** | Critical Temperature |
| **tf:** | Normal melting (fusion) point |
| **vc:** | Critical Volume |