# 1-Methyl-1,2,3,4-tetrahydrophenanthrene

**Inchi:** InChI=1S/C15H16/c1-11-5-4-8-15-13(11)10-9-12-6-2-3-7-14(12)15/h2-3,6-7,9-11H,4-5,8
**InchiKey:** HEUMEXLOFIYOAS-UHFFFAOYSA-N
**Formula:** C15H16
**SMILES:** CC1CCCc2c1ccc1ccccc21
**Mol. weight [g/mol]:** 196.29

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | 323.87 | kJ/mol | Joback Method |
| hf | 118.37 | kJ/mol | Joback Method |
| hfus | 20.92 | kJ/mol | Joback Method |
| hvap | 54.31 | kJ/mol | Joback Method |
| log10ws | -5.16 | | Crippen Method |
| logp | 4.280 | | Crippen Method |
| mcvol | 168.130 | ml/mol | McGowan Method |
| pc | 2611.07 | kPa | Joback Method |
| rinpol | 1810.00 | | NIST Webbook |
| tb | 609.23 | K | Joback Method |
| tc | 852.63 | K | Joback Method |
| tf | 357.39 | K | Joback Method |
| vc | 0.638 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 426.15 | J/mol×K | 609.23 | Joback Method |
| cpg | 506.30 | J/mol×K | 812.06 | Joback Method |
| cpg | 492.61 | J/mol×K | 771.49 | Joback Method |
| cpg | 477.87 | J/mol×K | 730.93 | Joback Method |
| cpg | 461.96 | J/mol×K | 690.36 | Joback Method |
| cpg | 444.76 | J/mol×K | 649.80 | Joback Method |
| cpg | 519.04 | J/mol×K | 852.63 | Joback Method |
| dvisc | 0.0004911 | Pa×s | 609.23 | Joback Method |
| dvisc | 0.0005582 | Pa×s | 567.26 | Joback Method |

| | | | | |
|---|---|---|---|---|
| dvisc | 0.0006475 | Pa×s | 525.28 | Joback Method |
| dvisc | 0.0007707 | Pa×s | 483.31 | Joback Method |
| dvisc | 0.0009483 | Pa×s | 441.34 | Joback Method |
| dvisc | 0.0012188 | Pa×s | 399.36 | Joback Method |
| dvisc | 0.0016615 | Pa×s | 357.39 | Joback Method |

# Sources

| | |
|---|---|
| **Crippen Method:** | https://www.chemeo.com/doc/models/crippen_log10ws |
| **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=R578168&Units=SI |
| **Crippen Method:** | http://pubs.acs.org/doi/abs/10.1021/ci990307l |

# Legend

| | |
|---|---|
| **cpg:** | Ideal gas heat capacity |
| **dvisc:** | Dynamic viscosity |
| **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 |
| **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 |