# 1-Naphthalenol, 1,2,3,4-tetrahydro-

| | |
|---|---|
| **Other names:** | 1-Naphthol, 1,2,3,4-tetrahydro- |
| | «alpha»-Tetralol |
| | Tetrahydro-1-naphthol |
| | Tetralin-1-ol |
| | 1-Tetralol |
| | 1,2,3,4-Tetrahydro-1-naphthol |
| | 1,2,3,4-Tetrahydro-«alpha»-naphthol |
| | 1,2,3,4-Tetrahydro-1-naphthalenol |
| | 1-Hydroxytetralin |
| | NSC 5172 |
| | 1,2,3,4-tetrahydronaphthalen-1-ol |
| **Inchi:** | InChI=1S/C10H12O/c11-10-7-3-5-8-4-1-2-6-9(8)10/h1-2,4,6,10-11H,3,5,7H2 |
| **InchiKey:** | JAAJQSRLGAYGKZ-UHFFFAOYSA-N |
| **Formula:** | C10H12O |
| **SMILES:** | OC1CCCc2ccccc21 |
| **Mol. weight [g/mol]:** | 148.20 |
| **CAS:** | 529-33-9 |

# Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| chs | -5408.70 | kJ/mol | NIST Webbook |
| gf | 47.93 | kJ/mol | Joback Method |
| hf | -110.26 | kJ/mol | Joback Method |
| hfus | 15.43 | kJ/mol | Joback Method |
| hvap | 57.56 | kJ/mol | Joback Method |
| ie | 8.70 ± 0.01 | eV | NIST Webbook |
| log10ws | -2.69 | | Crippen Method |
| logp | 2.056 | | Crippen Method |
| mcvol | 123.010 | ml/mol | McGowan Method |
| pc | 3834.03 | kPa | Joback Method |
| tb | 563.05 | K | Joback Method |
| tc | 777.80 | K | Joback Method |
| tf | 316.64 | K | Joback Method |
| vc | 0.456 | m3/kmol | Joback Method |

# Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 297.13 | J/mol×K | 563.05 | Joback Method |
| cpg | 310.75 | J/mol×K | 598.84 | Joback Method |
| cpg | 323.48 | J/mol×K | 634.63 | Joback Method |
| cpg | 335.35 | J/mol×K | 670.42 | Joback Method |
| cpg | 346.43 | J/mol×K | 706.21 | Joback Method |
| cpg | 356.76 | J/mol×K | 742.01 | Joback Method |
| cpg | 366.40 | J/mol×K | 777.80 | Joback Method |
| dvisc | 0.0066435 | Pa×s | 316.64 | Joback Method |
| dvisc | 0.0025404 | Pa×s | 357.71 | Joback Method |
| dvisc | 0.0011841 | Pa×s | 398.78 | Joback Method |
| dvisc | 0.0006365 | Pa×s | 439.84 | Joback Method |
| dvisc | 0.0003804 | Pa×s | 480.91 | Joback Method |
| dvisc | 0.0002465 | Pa×s | 521.98 | Joback Method |
| dvisc | 0.0001702 | Pa×s | 563.05 | Joback Method |

# Pressure Dependent Properties

| Property code | Value | Unit | Pressure [kPa] | Source |
|---|---|---|---|---|
| tbrp | 376.20 | K | 0.30 | NIST Webbook |

# Sources

**Crippen Method:** http://pubs.acs.org/doi/abs/10.1021/ci990307l

**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=C529339&Units=SI

# Legend

| | |
|---|---|
| **chs:** | Standard solid enthalpy of combustion |
| **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 |
| **ie:** | Ionization energy |
| **log10ws:** | Log10 of Water solubility in mol/l |
| **logp:** | Octanol/Water partition coefficient |
| **mcvol:** | McGowan's characteristic volume |
| **pc:** | Critical Pressure |
| **tb:** | Normal Boiling Point Temperature |
| **tbrp:** | Boiling point at reduced pressure |
| **tc:** | Critical Temperature |
| **tf:** | Normal melting (fusion) point |
| **vc:** | Critical Volume |

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