# 1-Naphthylmethyl radical

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|---|---|
| **Inchi:** | InChI=1S/C11H9/c1-9-5-4-7-10-6-2-3-8-11(9)10/h2-8H,1H2 |
| **InchiKey:** | PHRABVHYUHIYGY-UHFFFAOYSA-N |
| **Formula:** | C11H9 |
| **SMILES:** | [CH2]c1cccc2ccccc12 |
| **Mol. weight [g/mol]:** | 141.19 |
| **CAS:** | 7419-60-5 |

# Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | 303.55 | kJ/mol | Joback Method |
| hf | 201.57 | kJ/mol | Joback Method |
| hfus | 16.60 | kJ/mol | Joback Method |
| hvap | 44.51 | kJ/mol | Joback Method |
| ie | 7.40 ± 0.10 | eV | NIST Webbook |
| log10ws | -3.37 | | Crippen Method |
| logp | 3.022 | | Crippen Method |
| mcvol | 120.480 | ml/mol | McGowan Method |
| pc | 3589.94 | kPa | Joback Method |
| tb | 501.02 | K | Joback Method |
| tc | 731.61 | K | Joback Method |
| tf | 301.74 | K | Joback Method |
| vc | 0.457 | m3/kmol | Joback Method |

# Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 244.73 | J/mol×K | 501.02 | Joback Method |
| cpg | 300.43 | J/mol×K | 693.18 | Joback Method |
| cpg | 291.12 | J/mol×K | 654.75 | Joback Method |
| cpg | 281.00 | J/mol×K | 616.31 | Joback Method |
| cpg | 269.97 | J/mol×K | 577.88 | Joback Method |
| cpg | 257.91 | J/mol×K | 539.45 | Joback Method |
| cpg | 309.04 | J/mol×K | 731.61 | Joback Method |
| dvisc | 0.0005655 | Pa×s | 501.02 | Joback Method |

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|---|---|---|---|---|
| dvisc | 0.0006136 | Pa×s | 467.81 | Joback Method |
| dvisc | 0.0006742 | Pa×s | 434.59 | Joback Method |
| dvisc | 0.0007525 | Pa×s | 401.38 | Joback Method |
| dvisc | 0.0008566 | Pa×s | 368.17 | Joback Method |
| dvisc | 0.0010005 | Pa×s | 334.95 | Joback Method |
| dvisc | 0.0012093 | Pa×s | 301.74 | Joback Method |

# Sources

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|---|---|
| **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=C7419605&Units=SI |

# 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 |
| **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 |
| **tc:** | Critical Temperature |
| **tf:** | Normal melting (fusion) point |
| **vc:** | Critical Volume |