# Naphthalene, decahydro-1,6-dimethyl-4-(1-methylethyl)-

**Other names:** Muurolane
4-Isopropyl-1,6-dimethyldecahydronaphthalene
Naphthalene, decahydro-4-isopropyl-1,6-dimethyl-
Muurolane-a

**Inchi:** InChI=1S/C15H28/c1-10(2)13-8-6-12(4)14-7-5-11(3)9-15(13)14/h10-15H,5-9H2,1-4H3/t1

**InchiKey:** FZZNNPQZDRVKLU-PCGVCOGMSA-N

**Formula:** C15H28

**SMILES:** CC1CCC2C(C)CCC(C(C)C)C2C1

**Mol. weight [g/mol]:** 208.38

**CAS:** 29788-41-8

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | 122.95 | kJ/mol | Joback Method |
| hf | -298.27 | kJ/mol | Joback Method |
| hfus | 22.17 | kJ/mol | Joback Method |
| hvap | 48.18 | kJ/mol | Joback Method |
| log10ws | -4.44 | | Crippen Method |
| logp | 4.741 | | Crippen Method |
| mcvol | 200.490 | ml/mol | McGowan Method |
| pc | 1752.14 | kPa | Joback Method |
| rinpol | 1479.00 | | NIST Webbook |
| rinpol | 1506.00 | | NIST Webbook |
| rinpol | 1455.00 | | NIST Webbook |
| rinpol | 1445.00 | | NIST Webbook |
| rinpol | 1445.00 | | NIST Webbook |
| ripol | 1659.00 | | NIST Webbook |
| ripol | 1582.00 | | NIST Webbook |
| tb | 558.71 | K | Joback Method |
| tc | 767.90 | K | Joback Method |
| tf | 252.89 | K | Joback Method |
| vc | 0.749 | m3/kmol | Joback Method |

# Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 540.96 | J/mol×K | 558.71 | Joback Method |
| cpg | 659.45 | J/mol×K | 733.03 | Joback Method |
| cpg | 638.49 | J/mol×K | 698.17 | Joback Method |
| cpg | 616.21 | J/mol×K | 663.30 | Joback Method |
| cpg | 592.55 | J/mol×K | 628.44 | Joback Method |
| cpg | 567.48 | J/mol×K | 593.57 | Joback Method |
| cpg | 679.13 | J/mol×K | 767.90 | Joback Method |
| dvisc | 0.0004163 | Pa×s | 558.71 | Joback Method |
| dvisc | 0.0004840 | Pa×s | 507.74 | Joback Method |
| dvisc | 0.0005821 | Pa×s | 456.77 | Joback Method |
| dvisc | 0.0007332 | Pa×s | 405.80 | Joback Method |
| dvisc | 0.0009869 | Pa×s | 354.83 | Joback Method |
| dvisc | 0.0014675 | Pa×s | 303.86 | Joback Method |
| dvisc | 0.0025609 | Pa×s | 252.89 | Joback Method |

# Sources

**NIST Webbook:** http://webbook.nist.gov/cgi/cbook.cgi?ID=C29788418&Units=SI
**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

# 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 |
| **ripol:** | Polar retention indices |
| **tb:** | Normal Boiling Point Temperature |
| **tc:** | Critical Temperature |
| **tf:** | Normal melting (fusion) point |
| **vc:** | Critical Volume |