# Tricyclo[8.2.2.2<sup>4,7</sup>]hexadeca-4,6,10,1

**Other names:** 2,5,2',5'-Tetramethyl-[2.2]paracyclophane
Tricyclo[8.2.2.2
**Inchi:** InChI=1S/C20H24/c1-13-9-17-5-6-18-11-15(3)20(16(4)12-18)8-7-19(13)14(2)10-17/h9-12
**InchiKey:** LBFPZAXQCRQAOQ-UHFFFAOYSA-N
**Formula:** C20H24
**SMILES:** Cc1cc2cc(C)c1CCc1c(C)cc(cc1C)CC2
**Mol. weight [g/mol]:** 264.40
**CAS:** 35233-71-7

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | 340.92 | kJ/mol | Joback Method |
| hf | 35.09 | kJ/mol | Joback Method |
| hfus | 28.27 | kJ/mol | Joback Method |
| hvap | 69.03 | kJ/mol | Joback Method |
| ie | 7.75 ± 0.05 | eV | NIST Webbook |
| ie | 7.52 | eV | NIST Webbook |
| ie | 7.20 | eV | NIST Webbook |
| log10ws | -6.46 | | Crippen Method |
| logp | 4.804 | | Crippen Method |
| mcvol | 234.280 | ml/mol | McGowan Method |
| pc | 1768.38 | kPa | Joback Method |
| tb | 755.92 | K | Joback Method |
| tc | 994.98 | K | Joback Method |
| tf | 461.78 | K | Joback Method |
| vc | 0.889 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 671.01 | J/mol×K | 755.92 | Joback Method |
| cpg | 690.35 | J/mol×K | 795.76 | Joback Method |
| cpg | 708.38 | J/mol×K | 835.61 | Joback Method |
| cpg | 725.18 | J/mol×K | 875.45 | Joback Method |

| | | | | |
|---|---|---|---|---|
| cpg | 740.83 | J/mol×K | 915.29 | Joback Method |
| cpg | 755.43 | J/mol×K | 955.14 | Joback Method |
| cpg | 769.06 | J/mol×K | 994.98 | Joback Method |
| dvisc | 0.0008301 | Pa×s | 461.78 | Joback Method |
| dvisc | 0.0005595 | Pa×s | 510.80 | Joback Method |
| dvisc | 0.0004041 | Pa×s | 559.83 | Joback Method |
| dvisc | 0.0003075 | Pa×s | 608.85 | Joback Method |
| dvisc | 0.0002438 | Pa×s | 657.87 | Joback Method |
| dvisc | 0.0001996 | Pa×s | 706.90 | Joback Method |
| dvisc | 0.0001677 | Pa×s | 755.92 | Joback Method |

# Sources

**McGowan Method:** http://link.springer.com/article/10.1007/BF02311772
**NIST Webbook:** http://webbook.nist.gov/cgi/cbook.cgi?ID=C35233717&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

# 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

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