# Cyclohexane, 1-(1,5-dimethylhexyl)-4-(4-methylpentyl)-

**Other names:** 1-(1,5-dimethylhexyl)-4-(4-methylpentyl)cyclohexane
**Inchi:** InChI=1S/C20H40/c1-16(2)8-6-10-18(5)20-14-12-19(13-15-20)11-7-9-17(3)4/h16-20H,6-
**InchiKey:** OGABIDLNGVAJFL-UHFFFAOYSA-N
**Formula:** C20H40
**SMILES:** CC(C)CCCC1CCC(C(C)CCCC(C)C)CC1
**Mol. weight [g/mol]:** 280.53
**CAS:** 56009-20-2

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | 126.94 | kJ/mol | Joback Method |
| hf | -437.99 | kJ/mol | Joback Method |
| hfus | 29.89 | kJ/mol | Joback Method |
| hvap | 59.07 | kJ/mol | Joback Method |
| log10ws | -6.88 | | Crippen Method |
| logp | 7.082 | | Crippen Method |
| mcvol | 281.800 | ml/mol | McGowan Method |
| pc | 1155.35 | kPa | Joback Method |
| tb | 670.56 | K | Joback Method |
| tc | 856.86 | K | Joback Method |
| tf | 273.30 | K | Joback Method |
| vc | 1.069 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 840.63 | J/mol×K | 670.56 | Joback Method |
| cpg | 865.48 | J/mol×K | 701.61 | Joback Method |
| cpg | 889.06 | J/mol×K | 732.66 | Joback Method |
| cpg | 911.39 | J/mol×K | 763.71 | Joback Method |
| cpg | 932.52 | J/mol×K | 794.76 | Joback Method |
| cpg | 952.48 | J/mol×K | 825.81 | Joback Method |
| cpg | 971.30 | J/mol×K | 856.86 | Joback Method |
| dvisc | 0.0111844 | Pa×s | 273.30 | Joback Method |

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|---|---|---|---|---|
| dvisc | 0.0023545 | Pa×s | 339.51 | Joback Method |
| dvisc | 0.0008242 | Pa×s | 405.72 | Joback Method |
| dvisc | 0.0003874 | Pa×s | 471.93 | Joback Method |
| dvisc | 0.0002192 | Pa×s | 538.14 | Joback Method |
| dvisc | 0.0001405 | Pa×s | 604.35 | Joback Method |
| dvisc | 0.0000984 | Pa×s | 670.56 | Joback Method |

# Sources

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|---|---|
| **McGowan Method:** | http://link.springer.com/article/10.1007/BF02311772 |
| **NIST Webbook:** | http://webbook.nist.gov/cgi/cbook.cgi?ID=C56009202&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

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|---|---|
| **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 |
| **tb:** | Normal Boiling Point Temperature |
| **tc:** | Critical Temperature |
| **tf:** | Normal melting (fusion) point |
| **vc:** | Critical Volume |