# Cyclohexane, 1-methyl-3-(1-methylethyl)-

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|---|---|
| **Other names:** | 1-Isopropyl-3-methylcyclohexane |
| | m-Menthane |
| | 3-Methyl-1-(1-methylethyl)cyclohexane |
| | Iso-m-menthane |
| **Inchi:** | InChI=1S/C10H20/c1-8(2)10-6-4-5-9(3)7-10/h8-10H,4-7H2,1-3H3 |
| **InchiKey:** | QRDCBPPMQOPHOU-UHFFFAOYSA-N |
| **Formula:** | C10H20 |
| **SMILES:** | CC1CCCC(C(C)C)C1 |
| **Mol. weight [g/mol]:** | 140.27 |
| **CAS:** | 16580-24-8 |

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | 47.62 | kJ/mol | Joback Method |
| hf | -221.03 | kJ/mol | Joback Method |
| hfus | 11.04 | kJ/mol | Joback Method |
| hvap | 37.59 | kJ/mol | Joback Method |
| log10ws | -3.18 | | Crippen Method |
| logp | 3.469 | | Crippen Method |
| mcvol | 140.900 | ml/mol | McGowan Method |
| pc | 2505.01 | kPa | Joback Method |
| rinpol | 1009.00 | | NIST Webbook |
| rinpol | 1037.00 | | NIST Webbook |
| rinpol | 1009.00 | | NIST Webbook |
| rinpol | 1037.00 | | NIST Webbook |
| tb | 441.00 ± 5.00 | K | NIST Webbook |
| tb | 440.00 ± 5.00 | K | NIST Webbook |
| tc | 643.71 | K | Joback Method |
| tf | 190.60 | K | Joback Method |
| vc | 0.521 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|

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|---|---|---|---|---|
| cpg | 299.72 | J/mol×K | 442.64 | Joback Method |
| cpg | 320.07 | J/mol×K | 476.15 | Joback Method |
| cpg | 339.46 | J/mol×K | 509.66 | Joback Method |
| cpg | 357.93 | J/mol×K | 543.18 | Joback Method |
| cpg | 375.49 | J/mol×K | 576.69 | Joback Method |
| cpg | 392.17 | J/mol×K | 610.20 | Joback Method |
| cpg | 407.97 | J/mol×K | 643.71 | Joback Method |
| dvisc | 0.0082413 | Pa×s | 190.60 | Joback Method |
| dvisc | 0.0027291 | Pa×s | 232.61 | Joback Method |
| dvisc | 0.0012673 | Pa×s | 274.61 | Joback Method |
| dvisc | 0.0007213 | Pa×s | 316.62 | Joback Method |
| dvisc | 0.0004685 | Pa×s | 358.63 | Joback Method |
| dvisc | 0.0003331 | Pa×s | 400.63 | Joback Method |
| dvisc | 0.0002527 | Pa×s | 442.64 | Joback Method |

# Sources

**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=C16580248&Units=SI
**Crippen Method:** http://pubs.acs.org/doi/abs/10.1021/ci990307l

# 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
**tb:** Normal Boiling Point Temperature
**tc:** Critical Temperature

**tf:** Normal melting (fusion) point

**vc:** Critical Volume