# Cyclopropane, 1,2-dimethyl-, trans-

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|---|---|
| **Other names:** | trans-1,2-Dimethylcyclopropane |
| | (E)-1,2-Dimethylcyclopropane |
| **Inchi:** | InChI=1S/C5H10/c1-4-3-5(4)2/h4-5H,3H2,1-2H3/t4-,5-/m1/s1 |
| **InchiKey:** | VKJLDXGFBJBTRQ-RFZPGFLSSA-N |
| **Formula:** | C5H10 |
| **SMILES:** | CC1CC1C |
| **Mol. weight [g/mol]:** | 70.13 |
| **CAS:** | 2402-06-4 |

# Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| chl | -3366.00 ± 0.75 | kJ/mol | NIST Webbook |
| gf | 44.26 | kJ/mol | Joback Method |
| hf | -94.07 | kJ/mol | Joback Method |
| hfl | -30.70 ± 0.79 | kJ/mol | NIST Webbook |
| hfus | 7.91 | kJ/mol | Joback Method |
| hvap | 26.33 | kJ/mol | Joback Method |
| ie | 9.73 ± 0.02 | eV | NIST Webbook |
| ie | 9.02 ± 0.05 | eV | NIST Webbook |
| log10ws | -1.33 | | Crippen Method |
| logp | 1.662 | | Crippen Method |
| mcvol | 70.450 | ml/mol | McGowan Method |
| pc | 3901.37 | kPa | Joback Method |
| tb | 301.66 ± 0.50 | K | NIST Webbook |
| tb | 301.35 ± 0.20 | K | NIST Webbook |
| tb | 302.05 ± 0.50 | K | NIST Webbook |
| tb | 300.65 ± 1.00 | K | NIST Webbook |
| tb | 301.36 ± 0.30 | K | NIST Webbook |
| tb | 302.05 ± 1.00 | K | NIST Webbook |
| tb | 301.35 ± 0.40 | K | NIST Webbook |
| tc | 493.17 | K | Joback Method |
| tf | 123.58 ± 0.04 | K | NIST Webbook |
| tf | 123.58 ± 0.04 | K | NIST Webbook |
| tf | 123.33 ± 0.20 | K | NIST Webbook |
| tf | 123.52 ± 0.06 | K | NIST Webbook |
| tf | 123.52 ± 0.07 | K | NIST Webbook |
| tf | 123.18 ± 0.20 | K | NIST Webbook |

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|---|---|---|---|
| tf | 123.18 ± 0.20 | K | NIST Webbook |
| tf | 123.52 ± 0.06 | K | NIST Webbook |
| tf | 123.52 ± 0.06 | K | NIST Webbook |
| tf | 123.33 ± 0.20 | K | NIST Webbook |
| tf | 123.33 ± 1.50 | K | NIST Webbook |
| vc | 0.272 | m3/kmol | Joback Method |

# Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 107.14 | J/mol×K | 315.87 | Joback Method |
| cpg | 118.05 | J/mol×K | 345.42 | Joback Method |
| cpg | 128.46 | J/mol×K | 374.97 | Joback Method |
| cpg | 138.38 | J/mol×K | 404.52 | Joback Method |
| cpg | 147.84 | J/mol×K | 434.07 | Joback Method |
| cpg | 156.84 | J/mol×K | 463.62 | Joback Method |
| cpg | 165.41 | J/mol×K | 493.17 | Joback Method |
| dvisc | 0.0001888 | Pa×s | 159.81 | Joback Method |
| dvisc | 0.0001859 | Pa×s | 185.82 | Joback Method |
| dvisc | 0.0001837 | Pa×s | 211.83 | Joback Method |
| dvisc | 0.0001821 | Pa×s | 237.84 | Joback Method |
| dvisc | 0.0001807 | Pa×s | 263.85 | Joback Method |
| dvisc | 0.0001797 | Pa×s | 289.86 | Joback Method |
| dvisc | 0.0001788 | Pa×s | 315.87 | Joback Method |

# Sources

**McGowan Method:** http://link.springer.com/article/10.1007/BF02311772
**NIST Webbook:** http://webbook.nist.gov/cgi/cbook.cgi?ID=C2402064&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

**chl:** Standard liquid enthalpy of combustion

| | |
|---|---|
| **cpg:** | Ideal gas heat capacity |
| **dvisc:** | Dynamic viscosity |
| **gf:** | Standard Gibbs free energy of formation |
| **hf:** | Enthalpy of formation at standard conditions |
| **hfl:** | Liquid phase 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 |