# 4-Methylcinnamaldehyde

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|---|---|
| **Inchi:** | InChI=1S/C10H10O/c1-9-4-6-10(7-5-9)3-2-8-11/h2-8H,1H3/b3-2+ |
| **InchiKey:** | DKOUYOVAEBQFHU-NSCUHMNNSA-N |
| **Formula:** | C10H10O |
| **SMILES:** | Cc1ccc(C=CC=O)cc1 |
| **Mol. weight [g/mol]:** | 146.19 |
| **CAS:** | 71277-10-6 |

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | 116.80 | kJ/mol | Joback Method |
| hf | 6.97 | kJ/mol | Joback Method |
| hfus | 17.80 | kJ/mol | Joback Method |
| hvap | 47.47 | kJ/mol | Joback Method |
| log10ws | -2.47 | | Crippen Method |
| logp | 2.207 | | Crippen Method |
| mcvol | 125.270 | ml/mol | McGowan Method |
| pc | 3318.18 | kPa | Joback Method |
| rinpol | 200.50 | | NIST Webbook |
| tb | 512.68 | K | Joback Method |
| tc | 733.50 | K | Joback Method |
| tf | 278.32 | K | Joback Method |
| vc | 0.484 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 259.86 | J/mol×K | 512.68 | Joback Method |
| cpg | 315.28 | J/mol×K | 696.70 | Joback Method |
| cpg | 305.68 | J/mol×K | 659.89 | Joback Method |
| cpg | 295.38 | J/mol×K | 623.09 | Joback Method |
| cpg | 284.34 | J/mol×K | 586.29 | Joback Method |
| cpg | 272.52 | J/mol×K | 549.48 | Joback Method |
| cpg | 324.23 | J/mol×K | 733.50 | Joback Method |
| dvisc | 0.0002293 | Pa×s | 512.68 | Joback Method |

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|---|---|---|---|---|
| dvisc | 0.0002874 | Pa×s | 473.62 | Joback Method |
| dvisc | 0.0003751 | Pa×s | 434.56 | Joback Method |
| dvisc | 0.0005159 | Pa×s | 395.50 | Joback Method |
| dvisc | 0.0007611 | Pa×s | 356.44 | Joback Method |
| dvisc | 0.0012355 | Pa×s | 317.38 | Joback Method |
| dvisc | 0.0022976 | Pa×s | 278.32 | 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=C71277106&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 |
| **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 |

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