# 3-Methylcinnamic acid

**Other names:** 2-Propenoic acid, 3-(3-methylphenyl)-
Cinnamic acid, m-methyl-
m-Methylcinnamic acid
**Inchi:** InChI=1S/C10H10O2/c1-8-3-2-4-9(7-8)5-6-10(11)12/h2-7H,1H3,(H,11,12)/b6-5+
**InchiKey:** JZINNAKNHHQBOS-AATRIKPKSA-N
**Formula:** C10H10O2
**SMILES:** Cc1cccc(C=CC(=O)O)c1
**Mol. weight [g/mol]:** 162.19
**CAS:** 3029-79-6

# Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | -49.42 | kJ/mol | Joback Method |
| hf | -172.26 | kJ/mol | Joback Method |
| hfus | 21.20 | kJ/mol | Joback Method |
| hvap | 64.18 | kJ/mol | Joback Method |
| log10ws | -2.29 | | Crippen Method |
| logp | 2.093 | | Crippen Method |
| mcvol | 131.140 | ml/mol | McGowan Method |
| pc | 3650.93 | kPa | Joback Method |
| tb | 610.07 | K | Joback Method |
| tc | 819.56 | K | Joback Method |
| tf | 347.07 | K | Joback Method |
| vc | 0.492 | m3/kmol | Joback Method |

# Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 305.72 | J/mol×K | 610.07 | Joback Method |
| cpg | 316.15 | J/mol×K | 644.98 | Joback Method |
| cpg | 325.90 | J/mol×K | 679.90 | Joback Method |
| cpg | 335.02 | J/mol×K | 714.81 | Joback Method |
| cpg | 343.54 | J/mol×K | 749.73 | Joback Method |
| cpg | 351.51 | J/mol×K | 784.64 | Joback Method |

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|---|---|---|---|---|
| cpg | 358.96 | J/mol×K | 819.56 | Joback Method |
| dvisc | 0.0038653 | Pa×s | 347.07 | Joback Method |
| dvisc | 0.0013852 | Pa×s | 390.90 | Joback Method |
| dvisc | 0.0006105 | Pa×s | 434.74 | Joback Method |
| dvisc | 0.0003127 | Pa×s | 478.57 | Joback Method |
| dvisc | 0.0001792 | Pa×s | 522.40 | Joback Method |
| dvisc | 0.0001119 | Pa×s | 566.24 | Joback Method |
| dvisc | 0.0000748 | Pa×s | 610.07 | 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=C3029796&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
**tb:** Normal Boiling Point Temperature
**tc:** Critical Temperature
**tf:** Normal melting (fusion) point
**vc:** Critical Volume