# 2,5-Dimethoxycinnamic acid

**Other names:** 2-Propenoic acid, 3-(2,5-dimethoxyphenyl)-
3-(2,5-Dimethoxyphenyl)-2-propenoic acid
2',5'-dimethoxycinnamic acid
trans-2,5-dimethoxycinnamic acid
**Inchi:** InChI=1S/C11H12O4/c1-14-9-4-5-10(15-2)8(7-9)3-6-11(12)13/h3-7H,1-2H3,(H,12,13)/b6
**InchiKey:** JPQWWJZORKTMIZ-ZZXKWVIFSA-N
**Formula:** C11H12O4
**SMILES:** COc1ccc(OC)c(C=CC(=O)O)c1
**Mol. weight [g/mol]:** 208.21
**CAS:** 10538-51-9

# Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | -260.63 | kJ/mol | Joback Method |
| hf | -468.81 | kJ/mol | Joback Method |
| hfus | 25.77 | kJ/mol | Joback Method |
| hsub | 138.80 ± 1.10 | kJ/mol | NIST Webbook |
| hvap | 71.88 | kJ/mol | Joback Method |
| log10ws | -2.05 | | Crippen Method |
| logp | 1.802 | | Crippen Method |
| mcvol | 156.970 | ml/mol | McGowan Method |
| pc | 3086.42 | kPa | Joback Method |
| tb | 682.77 | K | Joback Method |
| tc | 886.19 | K | Joback Method |
| tf | 415.32 | K | Joback Method |
| vc | 0.585 | m3/kmol | Joback Method |

# Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 399.37 | J/mol×K | 682.77 | Joback Method |
| cpg | 446.99 | J/mol×K | 852.29 | Joback Method |
| cpg | 438.68 | J/mol×K | 818.39 | Joback Method |
| cpg | 429.78 | J/mol×K | 784.48 | Joback Method |

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|---|---|---|---|---|
| cpg | 420.26 | J/mol×K | 750.58 | Joback Method |
| cpg | 410.13 | J/mol×K | 716.67 | Joback Method |
| cpg | 454.69 | J/mol×K | 886.19 | Joback Method |
| dvisc | 0.0000349 | Pa×s | 682.77 | Joback Method |
| dvisc | 0.0000498 | Pa×s | 638.19 | Joback Method |
| dvisc | 0.0000748 | Pa×s | 593.62 | Joback Method |
| dvisc | 0.0001202 | Pa×s | 549.04 | Joback Method |
| dvisc | 0.0002098 | Pa×s | 504.47 | Joback Method |
| dvisc | 0.0004082 | Pa×s | 459.89 | Joback Method |
| dvisc | 0.0009159 | Pa×s | 415.32 | Joback Method |

# Sources

**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
**McGowan Method:** http://link.springer.com/article/10.1007/BF02311772
**NIST Webbook:** http://webbook.nist.gov/cgi/cbook.cgi?ID=C10538519&Units=SI

# 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
**hsub:** Enthalpy of sublimation 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

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