# Methyltartronic acid

**Inchi:** InChI=1S/C4H6O5/c1-4(9,2(5)6)3(7)8/h9H,1H3,(H,5,6)(H,7,8)
**InchiKey:** LNRVTEQEGXVMEF-UHFFFAOYSA-N
**Formula:** C4H6O5
**SMILES:** CC(O)(C(=O)O)C(=O)O
**Mol. weight [g/mol]:** 134.09
**CAS:** 595-98-2

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | -682.66 | kJ/mol | Joback Method |
| hf | -816.49 | kJ/mol | Joback Method |
| hfus | 14.16 | kJ/mol | Joback Method |
| hvap | 86.73 | kJ/mol | Joback Method |
| log10ws | 0.93 | | Crippen Method |
| logp | -1.093 | | Crippen Method |
| mcvol | 87.970 | ml/mol | McGowan Method |
| pc | 7169.69 | kPa | Joback Method |
| tb | 671.97 | K | Joback Method |
| tc | 850.48 | K | Joback Method |
| tf | 419.58 | K | Joback Method |
| vc | 0.318 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 225.65 | J/mol×K | 671.97 | Joback Method |
| cpg | 230.08 | J/mol×K | 701.72 | Joback Method |
| cpg | 234.21 | J/mol×K | 731.47 | Joback Method |
| cpg | 238.06 | J/mol×K | 761.23 | Joback Method |
| cpg | 241.65 | J/mol×K | 790.98 | Joback Method |
| cpg | 245.01 | J/mol×K | 820.73 | Joback Method |
| cpg | 248.14 | J/mol×K | 850.48 | Joback Method |
| dvisc | 0.0027201 | Pa×s | 419.58 | Joback Method |
| dvisc | 0.0006518 | Pa×s | 461.65 | Joback Method |

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|---|---|---|---|---|
| dvisc | 0.0001983 | Pa×s | 503.71 | Joback Method |
| dvisc | 0.0000725 | Pa×s | 545.78 | Joback Method |
| dvisc | 0.0000306 | Pa×s | 587.84 | Joback Method |
| dvisc | 0.0000145 | Pa×s | 629.90 | Joback Method |
| dvisc | 0.0000075 | Pa×s | 671.97 | 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=C595982&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

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|---|---|
| **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 |