# Pentanedioic acid, 2-methyl-

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|---|---|
| **Other names:** | «alpha»-Methylglutaric acid |
| | Glutaric acid, 2-methyl- |
| | 2-Methylglutaric acid |
| | dl-«alpha»-Methylglutaric acid |
| **Inchi:** | InChI=1S/C6H10O4/c1-4(6(9)10)2-3-5(7)8/h4H,2-3H2,1H3,(H,7,8)(H,9,10) |
| **InchiKey:** | AQYCMVICBNBXNA-UHFFFAOYSA-N |
| **Formula:** | C6H10O4 |
| **SMILES:** | CC(CCC(=O)O)C(=O)O |
| **Mol. weight [g/mol]:** | 146.14 |
| **CAS:** | 617-62-9 |

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | -534.28 | kJ/mol | Joback Method |
| hf | -702.07 | kJ/mol | Joback Method |
| hfus | 19.15 | kJ/mol | Joback Method |
| hvap | 75.41 | kJ/mol | Joback Method |
| log10ws | -0.29 | | Crippen Method |
| logp | 0.572 | | Crippen Method |
| mcvol | 110.280 | ml/mol | McGowan Method |
| pc | 4590.15 | kPa | Joback Method |
| tb | 628.34 | K | Joback Method |
| tc | 804.84 | K | Joback Method |
| tf | 363.88 | K | Joback Method |
| vc | 0.415 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 278.07 | J/mol×K | 628.34 | Joback Method |
| cpg | 285.25 | J/mol×K | 657.76 | Joback Method |
| cpg | 292.08 | J/mol×K | 687.17 | Joback Method |
| cpg | 298.55 | J/mol×K | 716.59 | Joback Method |
| cpg | 304.69 | J/mol×K | 746.00 | Joback Method |

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|---|---|---|---|---|
| cpg | 310.49 | J/mol×K | 775.42 | Joback Method |
| cpg | 315.96 | J/mol×K | 804.84 | Joback Method |
| dvisc | 0.0095884 | Pa×s | 363.88 | Joback Method |
| dvisc | 0.0022752 | Pa×s | 407.96 | Joback Method |
| dvisc | 0.0007147 | Pa×s | 452.03 | Joback Method |
| dvisc | 0.0002758 | Pa×s | 496.11 | Joback Method |
| dvisc | 0.0001243 | Pa×s | 540.19 | Joback Method |
| dvisc | 0.0000632 | Pa×s | 584.26 | Joback Method |
| dvisc | 0.0000353 | Pa×s | 628.34 | 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=C617629&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

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