# 2-Butenedioic acid, 2-methyl-, (Z)-

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|---|---|
| **Other names:** | Citraconic acid |
| | Methylmaleic acid |
| | cis-Methylbutenedioic acid |
| | Maleic acid, methyl- |
| | Kyselina citrakonova |
| | 2-Methyl-2-butenedioic acid |
| **Inchi:** | InChI=1S/C5H6O4/c1-3(5(8)9)2-4(6)7/h2H,1H3,(H,6,7)(H,8,9)/b3-2- |
| **InchiKey:** | HNEGQIOMVPPMNR-IHWYPQMZSA-N |
| **Formula:** | C5H6O4 |
| **SMILES:** | CC(=CC(=O)O)C(=O)O |
| **Mol. weight [g/mol]:** | 130.10 |
| **CAS:** | 498-23-7 |

# Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | -468.59 | kJ/mol | Joback Method |
| hf | -568.72 | kJ/mol | Joback Method |
| hfus | 18.97 | kJ/mol | Joback Method |
| hvap | 73.61 | kJ/mol | Joback Method |
| log10ws | 0.03 | | Crippen Method |
| logp | 0.102 | | Crippen Method |
| mcvol | 91.890 | ml/mol | McGowan Method |
| pc | 5644.74 | kPa | Joback Method |
| rinpol | 1222.00 | | NIST Webbook |
| tb | 609.94 | K | Joback Method |
| tc | 793.59 | K | Joback Method |
| tf | 356.40 ± 0.60 | K | NIST Webbook |
| tf | 356.15 ± 0.70 | K | NIST Webbook |
| vc | 0.346 | m3/kmol | Joback Method |

# Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 210.67 | J/mol×K | 609.94 | Joback Method |

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|---|---|---|---|---|
| cpg | 216.17 | J/mol×K | 640.55 | Joback Method |
| cpg | 221.35 | J/mol×K | 671.16 | Joback Method |
| cpg | 226.24 | J/mol×K | 701.77 | Joback Method |
| cpg | 230.85 | J/mol×K | 732.37 | Joback Method |
| cpg | 235.19 | J/mol×K | 762.98 | Joback Method |
| cpg | 239.29 | J/mol×K | 793.59 | 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=C498237&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 |
| **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 |