# Dimethyl 2-hydroxy-2-methylbutane-1,4-dioate

**Inchi:** InChI=1S/C7H12O5/c1-7(10,6(9)12-3)4-5(8)11-2/h10H,4H2,1-3H3
**InchiKey:** GMSSNUSBKDUVFC-UHFFFAOYSA-N
**Formula:** C7H12O5
**SMILES:** COC(=O)CC(C)(O)C(=O)OC
**Mol. weight [g/mol]:** 176.17
**CAS:** 19020-62-3

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | -593.76 | kJ/mol | Joback Method |
| hf | -838.39 | kJ/mol | Joback Method |
| hfus | 16.13 | kJ/mol | Joback Method |
| hvap | 64.87 | kJ/mol | Joback Method |
| log10ws | 0.15 | | Crippen Method |
| logp | -0.527 | | Crippen Method |
| mcvol | 130.240 | ml/mol | McGowan Method |
| pc | 3513.74 | kPa | Joback Method |
| rinpol | 1115.50 | | NIST Webbook |
| rinpol | 1087.00 | | NIST Webbook |
| rinpol | 1087.00 | | NIST Webbook |
| tb | 601.09 | K | Joback Method |
| tc | 787.29 | K | Joback Method |
| tf | 376.21 | K | Joback Method |
| vc | 0.483 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 328.87 | J/mol×K | 601.09 | Joback Method |
| cpg | 371.63 | J/mol×K | 756.26 | Joback Method |
| cpg | 364.03 | J/mol×K | 725.22 | Joback Method |
| cpg | 355.95 | J/mol×K | 694.19 | Joback Method |
| cpg | 347.41 | J/mol×K | 663.16 | Joback Method |
| cpg | 338.38 | J/mol×K | 632.12 | Joback Method |

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|---|---|---|---|---|
| cpg | 378.78 | J/mol×K | 787.29 | Joback Method |
| dvisc | 0.0000742 | Pa×s | 601.09 | Joback Method |
| dvisc | 0.0001113 | Pa×s | 563.61 | Joback Method |
| dvisc | 0.0001768 | Pa×s | 526.13 | Joback Method |
| dvisc | 0.0003018 | Pa×s | 488.65 | Joback Method |
| dvisc | 0.0005629 | Pa×s | 451.17 | Joback Method |
| dvisc | 0.0011753 | Pa×s | 413.69 | Joback Method |
| dvisc | 0.0028417 | Pa×s | 376.21 | 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=C19020623&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
**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

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