# DL-Glyceraldehyde, dimethyl ether

**Other names:** 2,3-Dimethoxypropanal
**Inchi:** InChI=1S/C5H10O3/c1-7-4-5(3-6)8-2/h3,5H,4H2,1-2H3
**InchiKey:** PNENILZGBBXDAG-UHFFFAOYSA-N
**Formula:** C5H10O3
**SMILES:** COCC(C=O)OC
**Mol. weight [g/mol]:** 118.13

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | -320.74 | kJ/mol | Joback Method |
| hf | -501.83 | kJ/mol | Joback Method |
| hfus | 9.85 | kJ/mol | Joback Method |
| hvap | 37.88 | kJ/mol | Joback Method |
| log10ws | 0.52 | | Crippen Method |
| logp | -0.153 | | Crippen Method |
| mcvol | 94.620 | ml/mol | McGowan Method |
| pc | 3673.09 | kPa | Joback Method |
| rinpol | 983.00 | | NIST Webbook |
| rinpol | 983.00 | | NIST Webbook |
| tb | 406.86 | K | Joback Method |
| tc | 584.53 | K | Joback Method |
| tf | 217.57 | K | Joback Method |
| vc | 0.362 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 186.47 | J/mol×K | 406.86 | Joback Method |
| cpg | 194.76 | J/mol×K | 436.47 | Joback Method |
| cpg | 202.86 | J/mol×K | 466.08 | Joback Method |
| cpg | 210.76 | J/mol×K | 495.69 | Joback Method |
| cpg | 218.46 | J/mol×K | 525.30 | Joback Method |
| cpg | 225.94 | J/mol×K | 554.92 | Joback Method |
| cpg | 233.20 | J/mol×K | 584.53 | Joback Method |

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|---|---|---|---|---|
| dvisc | 0.0037241 | Pa×s | 217.57 | Joback Method |
| dvisc | 0.0017929 | Pa×s | 249.12 | Joback Method |
| dvisc | 0.0010173 | Pa×s | 280.67 | Joback Method |
| dvisc | 0.0006473 | Pa×s | 312.22 | Joback Method |
| dvisc | 0.0004475 | Pa×s | 343.76 | Joback Method |
| dvisc | 0.0003292 | Pa×s | 375.31 | Joback Method |
| dvisc | 0.0002539 | Pa×s | 406.86 | Joback Method |

# Sources

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|---|---|
| **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=U332933&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 |
| **rinpol:** | Non-polar retention indices |
| **tb:** | Normal Boiling Point Temperature |
| **tc:** | Critical Temperature |
| **tf:** | Normal melting (fusion) point |
| **vc:** | Critical Volume |