# D-(+)-glyceraldehyde

**Other names:** Propanal, 2,3-dihydroxy-, (r)-
**Inchi:** InChI=1S/C3H6O3/c4-1-3(6)2-5/h1,3,5-6H,2H2/t3-/m1/s1
**InchiKey:** MNQZXJOMYWMBOU-GSVOUGTGSA-N
**Formula:** C3H6O3
**SMILES:** O=CC(O)CO
**Mol. weight [g/mol]:** 90.08
**CAS:** 453-17-8

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| chl | -1503.90 | kJ/mol | NIST Webbook |
| chs | -1448.00 | kJ/mol | NIST Webbook |
| gf | -401.22 | kJ/mol | Joback Method |
| hf | -500.57 | kJ/mol | Joback Method |
| hfus | 10.47 | kJ/mol | Joback Method |
| hvap | 61.96 | kJ/mol | Joback Method |
| log10ws | 1.00 | | Crippen Method |
| logp | -1.462 | | Crippen Method |
| mcvol | 66.440 | ml/mol | McGowan Method |
| pc | 6503.64 | kPa | Joback Method |
| tb | 500.62 | K | Joback Method |
| tc | 668.71 | K | Joback Method |
| tf | 272.21 | K | Joback Method |
| vc | 0.253 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 145.26 | J/mol×K | 500.62 | Joback Method |
| cpg | 166.80 | J/mol×K | 640.70 | Joback Method |
| cpg | 162.88 | J/mol×K | 612.68 | Joback Method |
| cpg | 158.77 | J/mol×K | 584.67 | Joback Method |
| cpg | 154.47 | J/mol×K | 556.65 | Joback Method |
| cpg | 149.96 | J/mol×K | 528.64 | Joback Method |

| | | | | |
|---|---|---|---|---|
| cpg | 170.54 | J/mol×K | 668.71 | Joback Method |
| dvisc | 0.0001203 | Pa×s | 500.62 | Joback Method |
| dvisc | 0.0002424 | Pa×s | 462.55 | Joback Method |
| dvisc | 0.0005539 | Pa×s | 424.48 | Joback Method |
| dvisc | 0.0014895 | Pa×s | 386.42 | Joback Method |
| dvisc | 0.0049726 | Pa×s | 348.35 | Joback Method |
| dvisc | 0.0223150 | Pa×s | 310.28 | Joback Method |
| dvisc | 0.1523958 | Pa×s | 272.21 | Joback Method |

# Sources

**McGowan Method:** http://link.springer.com/article/10.1007/BF02311772
**NIST Webbook:** http://webbook.nist.gov/cgi/cbook.cgi?ID=C453178&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

**chl:** Standard liquid enthalpy of combustion
**chs:** Standard solid enthalpy of combustion
**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