# 2-Methoxy-1,3-dioxolane

**Other names:** 1,3-Dioxolane, 2-methoxy-
**Inchi:** InChI=1S/C4H8O3/c1-5-4-6-2-3-7-4/h4H,2-3H2,1H3
**InchiKey:** VRAYTNFBRROPJU-UHFFFAOYSA-N
**Formula:** C4H8O3
**SMILES:** COC1OCCO1
**Mol. weight [g/mol]:** 104.10
**CAS:** 19693-75-5

# Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| chl | -2187.34 ± 0.89 | kJ/mol | NIST Webbook |
| gf | -257.89 | kJ/mol | Joback Method |
| hf | -481.60 ± 5.30 | kJ/mol | NIST Webbook |
| hf | -483.20 ± 1.10 | kJ/mol | NIST Webbook |
| hfl | -530.01 ± 0.69 | kJ/mol | NIST Webbook |
| hfl | -523.20 ± 3.30 | kJ/mol | NIST Webbook |
| hfus | 17.20 | kJ/mol | Joback Method |
| hvap | 41.60 | kJ/mol | NIST Webbook |
| hvap | 46.80 ± 0.80 | kJ/mol | NIST Webbook |
| hvap | 46.80 | kJ/mol | NIST Webbook |
| hvap | 41.60 ± 4.20 | kJ/mol | NIST Webbook |
| hvap | 46.40 ± 0.80 | kJ/mol | NIST Webbook |
| log10ws | 0.24 | | Crippen Method |
| logp | -0.037 | | Crippen Method |
| mcvol | 73.970 | ml/mol | McGowan Method |
| pc | 4710.65 | kPa | Joback Method |
| tb | 402.70 | K | NIST Webbook |
| tc | 582.25 | K | Joback Method |
| tf | 221.11 | K | Joback Method |
| vc | 0.261 | m3/kmol | Joback Method |

# Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|

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|---|---|---|---|---|
| cpg | 143.15 | J/mol×K | 382.52 | Joback Method |
| cpg | 153.22 | J/mol×K | 415.81 | Joback Method |
| cpg | 162.90 | J/mol×K | 449.10 | Joback Method |
| cpg | 172.18 | J/mol×K | 482.39 | Joback Method |
| cpg | 181.07 | J/mol×K | 515.67 | Joback Method |
| cpg | 189.57 | J/mol×K | 548.96 | Joback Method |
| cpg | 197.67 | J/mol×K | 582.25 | Joback Method |
| dvisc | 0.0036835 | Pa×s | 221.11 | Joback Method |
| dvisc | 0.0020710 | Pa×s | 248.01 | Joback Method |
| dvisc | 0.0013033 | Pa×s | 274.91 | Joback Method |
| dvisc | 0.0008908 | Pa×s | 301.81 | Joback Method |
| dvisc | 0.0006479 | Pa×s | 328.72 | Joback Method |
| dvisc | 0.0004946 | Pa×s | 355.62 | Joback Method |
| dvisc | 0.0003921 | Pa×s | 382.52 | Joback Method |
| hvapt | 46.80 ± 0.80 | kJ/mol | 293.00 | NIST Webbook |

# 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=C19693755&Units=SI
**Crippen Method:** http://pubs.acs.org/doi/abs/10.1021/ci990307l

# Legend

**chl:** Standard liquid 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
**hfl:** Liquid phase enthalpy of formation at standard conditions
**hfus:** Enthalpy of fusion at standard conditions
**hvap:** Enthalpy of vaporization at standard conditions
**hvapt:** Enthalpy of vaporization at a given temperature
**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 |