# Butanoic acid, 4-ethoxy-, methyl ester

**Other names:** Butyric acid, 4-ethoxy-, methyl ester
Methyl 4-ethoxybutanoate
**Inchi:** InChI=1S/C7H14O3/c1-3-10-6-4-5-7(8)9-2/h3-6H2,1-2H3
**InchiKey:** RVOAHFHZGYQSND-UHFFFAOYSA-N
**Formula:** C7H14O3
**SMILES:** CCOCCCC(=O)OC
**Mol. weight [g/mol]:** 146.18
**CAS:** 29006-04-0

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | -330.86 | kJ/mol | Joback Method |
| hf | -564.83 | kJ/mol | Joback Method |
| hfus | 17.86 | kJ/mol | Joback Method |
| hvap | 42.74 | kJ/mol | Joback Method |
| log10ws | -0.70 | | Crippen Method |
| logp | 0.976 | | Crippen Method |
| mcvol | 122.800 | ml/mol | McGowan Method |
| pc | 2887.40 | kPa | Joback Method |
| rinpol | 909.00 | | NIST Webbook |
| rinpol | 909.00 | | NIST Webbook |
| tb | 458.27 | K | Joback Method |
| tc | 634.29 | K | Joback Method |
| tf | 263.04 | K | Joback Method |
| vc | 0.469 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 261.73 | J/mol×K | 458.27 | Joback Method |
| cpg | 272.68 | J/mol×K | 487.61 | Joback Method |
| cpg | 283.31 | J/mol×K | 516.94 | Joback Method |
| cpg | 293.62 | J/mol×K | 546.28 | Joback Method |
| cpg | 303.59 | J/mol×K | 575.61 | Joback Method |

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|---|---|---|---|---|
| cpg | 313.23 | J/mol×K | 604.95 | Joback Method |
| cpg | 322.52 | J/mol×K | 634.29 | Joback Method |
| dvisc | 0.0024226 | Pa×s | 263.04 | Joback Method |
| dvisc | 0.0013150 | Pa×s | 295.58 | Joback Method |
| dvisc | 0.0008058 | Pa×s | 328.12 | Joback Method |
| dvisc | 0.0005394 | Pa×s | 360.65 | Joback Method |
| dvisc | 0.0003858 | Pa×s | 393.19 | Joback Method |
| dvisc | 0.0002905 | Pa×s | 425.73 | Joback Method |
| dvisc | 0.0002277 | Pa×s | 458.27 | Joback Method |

# Sources

**McGowan Method:** http://link.springer.com/article/10.1007/BF02311772
**NIST Webbook:** http://webbook.nist.gov/cgi/cbook.cgi?ID=C29006040&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

**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