# 4-Chlorobutanoic anhydride

**Inchi:** InChI=1S/C8H12Cl2O3/c9-5-1-3-7(11)13-8(12)4-2-6-10/h1-6H2
**InchiKey:** VAXCCWFPTAPDMK-UHFFFAOYSA-N
**Formula:** C8H12Cl2O3
**SMILES:** O=C(CCCCl)OC(=O)CCCCl
**Mol. weight [g/mol]:** 227.09

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | -370.22 | kJ/mol | Joback Method |
| hf | -597.31 | kJ/mol | Joback Method |
| hfus | 29.26 | kJ/mol | Joback Method |
| hvap | 58.07 | kJ/mol | Joback Method |
| log10ws | -2.12 | | Crippen Method |
| logp | 2.094 | | Crippen Method |
| mcvol | 157.070 | ml/mol | McGowan Method |
| pc | 2627.15 | kPa | Joback Method |
| rinpol | 1596.70 | | NIST Webbook |
| tb | 587.46 | K | Joback Method |
| tc | 781.58 | K | Joback Method |
| tf | 361.85 | K | Joback Method |
| vc | 0.612 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 349.34 | J/mol×K | 587.46 | Joback Method |
| cpg | 396.47 | J/mol×K | 749.23 | Joback Method |
| cpg | 388.07 | J/mol×K | 716.88 | Joback Method |
| cpg | 379.16 | J/mol×K | 684.52 | Joback Method |
| cpg | 369.74 | J/mol×K | 652.17 | Joback Method |
| cpg | 359.80 | J/mol×K | 619.81 | Joback Method |
| cpg | 404.37 | J/mol×K | 781.58 | Joback Method |
| dvisc | 0.0002626 | Pa×s | 587.46 | Joback Method |
| dvisc | 0.0003323 | Pa×s | 549.86 | Joback Method |

| | | | | |
|---|---|---|---|---|
| dvisc | 0.0004352 | Pa×s | 512.26 | Joback Method |
| dvisc | 0.0005949 | Pa×s | 474.66 | Joback Method |
| dvisc | 0.0008580 | Pa×s | 437.05 | Joback Method |
| dvisc | 0.0013259 | Pa×s | 399.45 | Joback Method |
| dvisc | 0.0022430 | Pa×s | 361.85 | 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=U333911&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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