# Cyclopentanecarboxaldehyde

| | |
|---|---|
| **Other names:** | Cyclopentanealdehyde |
| | Cyclopentylformaldehyde |
| | Formylcyclopentane |
| | Cyclopentyl aldehyde |
| | Cyclopentane-1-carboxaldehyde |
| | cyclopentanecarbaldehyde |
| **Inchi:** | InChI=1S/C6H10O/c7-5-6-3-1-2-4-6/h5-6H,1-4H2 |
| **InchiKey:** | VELDYOPRLMJFIK-UHFFFAOYSA-N |
| **Formula:** | C6H10O |
| **SMILES:** | O=CC1CCCC1 |
| **Mol. weight [g/mol]:** | 98.14 |
| **CAS:** | 872-53-7 |

# Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | -63.33 | kJ/mol | Joback Method |
| hf | -192.27 | kJ/mol | Joback Method |
| hfus | 7.52 | kJ/mol | Joback Method |
| hvap | 35.93 | kJ/mol | Joback Method |
| log10ws | -1.27 | | Crippen Method |
| logp | 1.375 | | Crippen Method |
| mcvol | 86.110 | ml/mol | McGowan Method |
| pc | 4216.56 | kPa | Joback Method |
| rinpol | 857.00 | | NIST Webbook |
| ripol | 1170.00 | | NIST Webbook |
| ripol | 1171.00 | | NIST Webbook |
| tb | 400.62 | K | Joback Method |
| tc | 604.41 | K | Joback Method |
| tf | 210.28 | K | Joback Method |
| vc | 0.330 | m3/kmol | Joback Method |

# Temperature Dependent Properties

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

| | | | | |
|---|---|---|---|---|
| cpg | 159.16 | J/mol×K | 400.62 | Joback Method |
| cpg | 171.99 | J/mol×K | 434.58 | Joback Method |
| cpg | 184.14 | J/mol×K | 468.55 | Joback Method |
| cpg | 195.63 | J/mol×K | 502.51 | Joback Method |
| cpg | 206.48 | J/mol×K | 536.48 | Joback Method |
| cpg | 216.72 | J/mol×K | 570.44 | Joback Method |
| cpg | 226.37 | J/mol×K | 604.41 | Joback Method |
| dvisc | 0.0036458 | Pa×s | 210.28 | Joback Method |
| dvisc | 0.0019804 | Pa×s | 242.00 | Joback Method |
| dvisc | 0.0012392 | Pa×s | 273.73 | Joback Method |
| dvisc | 0.0008548 | Pa×s | 305.45 | Joback Method |
| dvisc | 0.0006323 | Pa×s | 337.17 | Joback Method |
| dvisc | 0.0004926 | Pa×s | 368.90 | Joback Method |
| dvisc | 0.0003992 | Pa×s | 400.62 | Joback Method |

# 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=C872537&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
**ripol:** Polar retention indices
**tb:** Normal Boiling Point Temperature

| | |
|---|---|
| **tc:** | Critical Temperature |
| **tf:** | Normal melting (fusion) point |
| **vc:** | Critical Volume |