

Cyclopentanol, 1-ethyl-

| | |
|----------------------|--|
| Other names: | 1-Ethyl-1-cyclopentanol 1-Ethylcyclopentanol |
| Inchi: | InChI=1S/C7H14O/c1-2-7(8)5-3-4-6-7/h8H,2-6H2,1H3 |
| InchiKey: | LPCWIFFPJLFCXRS-UHFFFAOYSA-N |
| Formula: | C7H14O |
| SMILES: | CCC1(O)CCCC1 |
| Mol. weight [g/mol]: | 114.19 |
| CAS: | 1462-96-0 |

Physical Properties

| Property code | Value | Unit | Source |
|---------------|---------|---------|----------------|
| gf | -97.70 | kJ/mol | Joback Method |
| hf | -264.32 | kJ/mol | Joback Method |
| hfus | 5.61 | kJ/mol | Joback Method |
| hvap | 46.96 | kJ/mol | Joback Method |
| log10ws | -2.02 | | Crippen Method |
| logp | 1.701 | | Crippen Method |
| mcvol | 104.500 | ml/mol | McGowan Method |
| pc | 4041.50 | kPa | Joback Method |
| tb | 467.26 | K | Joback Method |
| tc | 660.80 | K | Joback Method |
| tf | 264.27 | K | Joback Method |
| vc | 0.386 | m3/kmol | Joback Method |

Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---------------|--------|---------|-----------------|---------------|
| cpg | 289.70 | J/mol×K | 628.54 | Joback Method |
| cpg | 231.78 | J/mol×K | 467.26 | Joback Method |
| cpg | 244.94 | J/mol×K | 499.52 | Joback Method |
| cpg | 257.22 | J/mol×K | 531.77 | Joback Method |
| cpg | 268.72 | J/mol×K | 564.03 | Joback Method |
| cpg | 279.52 | J/mol×K | 596.29 | Joback Method |
| cpg | 299.34 | J/mol×K | 660.80 | Joback Method |

hvapt

58.40

kJ/mol

386.50

NIST Webbook

Correlations

| Information | Value |
|-----------------------------|-------------------------------|
| Property code | pvap |
| Equation | $\ln(P_{vp}) = A + B/(T + C)$ |
| Coeff. A | 1.56660e+01 |
| Coeff. B | -4.16482e+03 |
| Coeff. C | -5.98980e+01 |
| Temperature range (K), min. | 330.72 |
| Temperature range (K), max. | 462.12 |

Sources

| | |
|---|---|
| Crippen Method: | http://pubs.acs.org/doi/abs/10.1021/ci9903071 |
| 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=C1462960&Units=SI |
| The Yaws Handbook of Vapor Pressure: | https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure |

Legend

| | |
|-----------------|---|
| cpg: | Ideal gas heat capacity |
| 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 |
| 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 |
| pvap: | Vapor pressure |

| | |
|------------|----------------------------------|
| tb: | Normal Boiling Point Temperature |
| tc: | Critical Temperature |
| tf: | Normal melting (fusion) point |
| vc: | Critical Volume |

Latest version available from:

<https://www.chemeo.com/cid/12-673-1/Cyclopentanol-1-ethyl.pdf>

Generated by Cheméo on 2024-04-10 19:56:57.466971171 +0000 UTC m=+15068266.387548487.

Cheméo (<https://www.chemeo.com>) is the biggest free database of chemical and physical data for the process industry.