# Pentanoic acid, 2-hydroxy-, ethyl ester

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|---|---|
| **Other names:** | Ethyl 2-hydroxyvalerate |
| | dl-Ethyl-«alpha»-hydroxy valerate |
| | ethyl 2-hydroxypentanoate |
| **Inchi:** | InChI=1S/C7H14O3/c1-3-5-6(8)7(9)10-4-2/h6,8H,3-5H2,1-2H3 |
| **InchiKey:** | MQGTZMCASHTGBJ-UHFFFAOYSA-N |
| **Formula:** | C7H14O3 |
| **SMILES:** | CCCC(O)C(=O)OCC |
| **Mol. weight [g/mol]:** | 146.18 |
| **CAS:** | 6938-26-7 |

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | -365.12 | kJ/mol | Joback Method |
| hf | -590.12 | kJ/mol | Joback Method |
| hfus | 17.24 | kJ/mol | Joback Method |
| hvap | 56.62 | kJ/mol | Joback Method |
| log10ws | -0.99 | | Crippen Method |
| logp | 0.710 | | Crippen Method |
| mcvol | 122.800 | ml/mol | McGowan Method |
| pc | 3287.81 | kPa | Joback Method |
| tb | 527.59 | K | Joback Method |
| tc | 700.51 | K | Joback Method |
| tf | 286.63 | K | Joback Method |
| vc | 0.465 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 288.76 | J/mol×K | 527.59 | Joback Method |
| cpg | 298.85 | J/mol×K | 556.41 | Joback Method |
| cpg | 308.56 | J/mol×K | 585.23 | Joback Method |
| cpg | 317.88 | J/mol×K | 614.05 | Joback Method |
| cpg | 326.83 | J/mol×K | 642.87 | Joback Method |
| cpg | 335.40 | J/mol×K | 671.69 | Joback Method |

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|---|---|---|---|---|
| cpg | 343.59 | J/mol×K | 700.51 | Joback Method |
| dvisc | 0.0172601 | Pa×s | 286.63 | Joback Method |
| dvisc | 0.0045782 | Pa×s | 326.79 | Joback Method |
| dvisc | 0.0016237 | Pa×s | 366.95 | Joback Method |
| dvisc | 0.0007065 | Pa×s | 407.11 | Joback Method |
| dvisc | 0.0003570 | Pa×s | 447.27 | Joback Method |
| dvisc | 0.0002019 | Pa×s | 487.43 | Joback Method |
| dvisc | 0.0001245 | Pa×s | 527.59 | Joback Method |

# Sources

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|---|---|
| **McGowan Method:** | http://link.springer.com/article/10.1007/BF02311772 |
| **NIST Webbook:** | http://webbook.nist.gov/cgi/cbook.cgi?ID=C6938267&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 |
| **tb:** | Normal Boiling Point Temperature |
| **tc:** | Critical Temperature |
| **tf:** | Normal melting (fusion) point |
| **vc:** | Critical Volume |

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