Pentanoic acid, 3-hydroxy-, ethyl ester

Other names: Ethyl 3-hydroxypentanoate
Inchi: InChI=1S/C7H14O3/c1-3-6(8)5-7(9)10-4-2/h6,8H,3-5H2,1-2H3
InchiKey: YESYELHMPYCIAQ-UHFFFAOYSA-N
Formula: C7H14O3
SMILES: CCOC(=O)CC(O)CC
Mol. weight [g/mol]: 146.18
CAS: 54074-85-0

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
rinpol	1129.00		NIST Webbook
ripol	1587.00		NIST Webbook
ripol	1552.00		NIST Webbook
ripol	1552.00		NIST Webbook
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	335.40	J/mol×K	671.69	Joback Method
cpg	326.83	J/mol×K	642.87	Joback Method
cpg	317.88	J/mol×K	614.05	Joback Method

cpg	308.56	J/mol×K	585.23	Joback Method
cpg	298.85	J/mol×K	556.41	Joback Method
cpg	343.59	J/mol×K	700.51	Joback Method
dvisc	0.0001245	Pa×s	527.59	Joback Method
dvisc	0.0002019	Pa×s	487.43	Joback Method
dvisc	0.0003570	Pa×s	447.27	Joback Method
dvisc	0.0007065	Pa×s	407.11	Joback Method
dvisc	0.0016237	Pa×s	366.95	Joback Method
dvisc	0.0045782	Pa×s	326.79	Joback Method
dvisc	0.0172601	Pa×s	286.63	Joback Method

Sources

McGowan Method: http://link.springer.com/article/10.1007/BF02311772
NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C54074850&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
ripol: Polar retention indices
tb: Normal Boiling Point Temperature
tc: Critical Temperature
tf: Normal melting (fusion) point
vc: Critical Volume