2-Hydroxyethyl 2,2,3,3,3-pentafluoropropanoate

Other names: Ethylene glycol, mono(pentafluoropropionate)
Inchi: InChI=1S/C5H5F5O3/c6-4(7,5(8,9)10)3(12)13-2-1-11/h11H,1-2H2
InchiKey: HBYRAQAHWNDWCK-UHFFFAOYSA-N
Formula: C5H5F5O3
SMILES: O=C(OCCO)C(F)(F)C(F)(F)F
Mol. weight [g/mol]: 208.08

Physical Properties

Property code	Value	Unit	Source
gf	-1347.89	kJ/mol	Joback Method
hf	-1541.61	kJ/mol	Joback Method
hfus	16.15	kJ/mol	Joback Method
hvap	45.88	kJ/mol	Joback Method
log10ws	-1.02		Crippen Method
logp	0.720		Crippen Method
mcvol	103.470	ml/mol	McGowan Method
pc	3276.53	kPa	Joback Method
tb	472.16	K	Joback Method
tc	624.68	K	Joback Method
tf	286.88	K	Joback Method
vc	0.426	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	253.12	J/mol×K	472.16	Joback Method
cpg	260.55	J/mol×K	497.58	Joback Method
cpg	267.56	J/mol×K	523.00	Joback Method
cpg	274.16	J/mol×K	548.42	Joback Method
cpg	280.37	J/mol×K	573.84	Joback Method
cpg	286.21	J/mol×K	599.26	Joback Method
cpg	291.69	J/mol×K	624.68	Joback Method

Sources

McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=U351968&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
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