2-(2-Hydroxyethoxy)ethyl 2,2,3,3,3-pentafluoropropanoate

Other names: Diethylene glycol, mono(pentafluoropropionate)
Inchi: InChI=1S/C7H9F5O4/c8-6(9,7(10,11)12)5(14)16-4-3-15-2-1-13/h13H,1-4H2
InchiKey: POKJNOVHMIVXTO-UHFFFAOYSA-N
Formula: C7H9F5O4
SMILES: O=C(OCCOCCO)C(F)(F)C(F)(F)F
Mol. weight [g/mol]: 252.14

Physical Properties

Property code	Value	Unit	Source
gf	-1436.05	kJ/mol	Joback Method
hf	-1715.11	kJ/mol	Joback Method
hfus	22.52	kJ/mol	Joback Method
hvap	52.74	kJ/mol	Joback Method
log10ws	-0.94		Crippen Method
logp	0.736		Crippen Method
mcvol	137.520	ml/mol	McGowan Method
pc	2613.74	kPa	Joback Method
rinpol	1018.80		NIST Webbook
rinpol	1018.80		NIST Webbook
tb	540.34	K	Joback Method
tc	692.90	K	Joback Method
tf	331.65	K	Joback Method
vc	0.556	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	360.05	J/mol×K	540.34	Joback Method
cpg	368.95	J/mol×K	565.77	Joback Method
cpg	377.40	J/mol×K	591.19	Joback Method
cpg	385.43	J/mol×K	616.62	Joback Method
cpg	393.03	J/mol×K	642.04	Joback Method
cpg	400.23	J/mol×K	667.47	Joback Method
cpg	407.05	J/mol×K	692.90	Joback Method

Sources

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=U351969&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws

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
rinpol:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume