2-(2,2,3,3,3-Pentafluoropropanoyl)oxyethyl 2,2,3,3,3-pentafluoropropanoate

Other names: Ethylene glycol, bis(pentafluoropropionate)
Inchi: InChI=1S/C8H4F10O4/c9-5(10,7(13,14)15)3(19)21-1-2-22-4(20)6(11,12)8(16,17)18/h1-2
InchiKey: CNMNDNGVVAWZNK-UHFFFAOYSA-N
Formula: C8H4F10O4
SMILES: O=C(OCCOC(=O)C(F)(F)C(F)(F)F)C(F)(F)C(F)(F)F
Mol. weight [g/mol]: 354.10

Physical Properties

Property code	Value	Unit	Source
gf	-2388.10	kJ/mol	Joback Method
hf	-2694.15	kJ/mol	Joback Method
hfus	23.19	kJ/mol	Joback Method
hvap	38.36	kJ/mol	Joback Method
log10ws	-2.85		Crippen Method
logp	2.468		Crippen Method
mcvol	156.160	ml/mol	McGowan Method
pc	1944.08	kPa	Joback Method
rinpol	844.60		NIST Webbook
tb	514.80	K	Joback Method
tc	661.80	K	Joback Method
tf	339.82	K	Joback Method
vc	0.667	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	418.50	J/mol×K	514.80	Joback Method
cpg	428.18	J/mol×K	539.30	Joback Method
cpg	437.24	J/mol×K	563.80	Joback Method
cpg	445.70	J/mol×K	588.30	Joback Method
cpg	453.60	J/mol×K	612.80	Joback Method
cpg	460.95	J/mol×K	637.30	Joback Method
cpg	467.79	J/mol×K	661.80	Joback Method

Sources

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=U352001&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l

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