Pentafluoropropanamide, N,N-didecyl-

Inchi: InChI=1S/C23H42F5NO/c1-3-5-7-9-11-13-15-17-19-29(21(30)22(24,25)23(26,27)28)20-1
InchiKey: XDLXFDJYTNLVOP-UHFFFAOYSA-N
Formula: C23H42F5NO
SMILES: CCCCCCCCCCN(CCCCCCCCCC)C(=O)C(F)(F)C(F)(F)F
Mol. weight [g/mol]: 443.58

Physical Properties

Property code	Value	Unit	Source
gf	-843.73	kJ/mol	Joback Method
hf	-1561.15	kJ/mol	Joback Method
hfus	60.52	kJ/mol	Joback Method
hvap	68.90	kJ/mol	Joback Method
log10ws	-8.77		Crippen Method
logp	8.294		Crippen Method
mcvol	355.330	ml/mol	McGowan Method
pc	792.60	kPa	Joback Method
rinpol	2275.00		NIST Webbook
rinpol	2275.00		NIST Webbook
tb	781.84	K	Joback Method
tc	957.30	K	Joback Method
tf	439.16	K	Joback Method
vc	1.415	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1142.58	J/mol×K	781.84	Joback Method
cpg	1162.85	J/mol×K	811.08	Joback Method
cpg	1182.06	J/mol×K	840.33	Joback Method
cpg	1200.28	J/mol×K	869.57	Joback Method
cpg	1217.57	J/mol×K	898.81	Joback Method
cpg	1234.01	J/mol×K	928.06	Joback Method
cpg	1249.67	J/mol×K	957.30	Joback Method

Sources

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
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=U308517&Units=SI

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