Heptafluorobutanamide, N,N-didecyl-

Inchi: InChI=1S/C24H42F7NO/c1-3-5-7-9-11-13-15-17-19-32(20-18-16-14-12-10-8-6-4-2)21(33
InchiKey: RUERTAZMHOMASV-UHFFFAOYSA-N
Formula: C24H42F7NO
SMILES: CCCCCCCCCCN(CCCCCCCCCC)C(=O)C(F)(F)C(F)(F)C(F)(F)F
Mol. weight [g/mol]: 493.59

Physical Properties

Property code	Value	Unit	Source
gf	-1222.09	kJ/mol	Joback Method
hf	-1982.76	kJ/mol	Joback Method
hfus	61.85	kJ/mol	Joback Method
hvap	68.20	kJ/mol	Joback Method
log10ws	-9.50		Crippen Method
logp	8.929		Crippen Method
mcvol	372.960	ml/mol	McGowan Method
pc	723.02	kPa	Joback Method
rinpol	2287.00		NIST Webbook
tb	800.03	K	Joback Method
tc	981.25	K	Joback Method
tf	454.03	K	Joback Method
vc	1.496	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1220.52	J/mol×K	800.03	Joback Method
cpg	1241.10	J/mol×K	830.23	Joback Method
cpg	1260.55	J/mol×K	860.44	Joback Method
cpg	1278.97	J/mol×K	890.64	Joback Method
cpg	1296.44	J/mol×K	920.84	Joback Method
cpg	1313.07	J/mol×K	951.05	Joback Method
cpg	1328.95	J/mol×K	981.25	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=U308278&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