l-Valine, n-heptafluorobutyryl-, hexadecyl ester

Inchi: InChI=1S/C25H42F7NO3/c1-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-36-21(34)20(19(2)

InchiKey: NXGNMICEPSUWMX-UHFFFAOYSA-N

Formula: C25H42F7NO3

SMILES: CCCCCCCCCCCCCCCCOC(=O)C(NC(=O)C(F)(F)C(F)(F)C(F)(F)F)C(C)C

Mol. weight [g/mol]: 537.59

Physical Properties

Property code	Value	Unit	Source
gf	-1473.86	kJ/mol	Joback Method
hf	-2272.82	kJ/mol	Joback Method
hfus	62.26	kJ/mol	Joback Method
hvap	83.20	kJ/mol	Joback Method
log10ws	-9.28		Crippen Method
logp	7.985		Crippen Method
mcvol	394.490	ml/mol	McGowan Method
pc	715.68	kPa	Joback Method
rinpol	2451.00		NIST Webbook
rinpol	2451.00		NIST Webbook
tb	936.05	K	Joback Method
tc	1159.12	K	Joback Method
tf	527.65	K	Joback Method
vc	1.581	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1363.92	J/mol×K	936.05	Joback Method
cpg	1383.93	J/mol×K	973.23	Joback Method
cpg	1402.61	J/mol×K	1010.41	Joback Method
cpg	1420.12	J/mol×K	1047.59	Joback Method
cpg	1436.61	J/mol×K	1084.76	Joback Method
cpg	1452.21	J/mol×K	1121.94	Joback Method
cpg	1467.09	J/mol×K	1159.12	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=U320906&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