N,N-bis(2-hydroxyethyl)decan-1-amide

Other names: N,N-Bis(2-hydroxyethyl)decanamide
Inchi: InChI=1S/C14H29NO3/c1-2-3-4-5-6-7-8-9-14(18)15(10-12-16)11-13-17/h16-17H,2-13H2
InchiKey: BPXGKRUSMCVZAF-UHFFFAOYSA-N
Formula: C14H29NO3
SMILES: CCCCCCCCCC(=O)N(CCO)CCO
Mol. weight [g/mol]: 259.38
CAS: 136-26-5

Physical Properties

Property code	Value	Unit	Source
gf	-224.78	kJ/mol	Joback Method
hf	-681.80	kJ/mol	Joback Method
hfus	44.81	kJ/mol	Joback Method
hvap	88.91	kJ/mol	Joback Method
log10ws	-2.56		Crippen Method
logp	1.940		Crippen Method
mcvol	231.410	ml/mol	McGowan Method
pc	1862.72	kPa	Joback Method
rinpol	2234.30		NIST Webbook
rinpol	2234.30		NIST Webbook
tb	770.39	K	Joback Method
tc	944.89	K	Joback Method
tf	451.58	K	Joback Method
vc	0.881	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	714.52	J/mol×K	770.39	Joback Method
cpg	728.27	J/mol×K	799.47	Joback Method
cpg	741.32	J/mol×K	828.56	Joback Method
cpg	753.73	J/mol×K	857.64	Joback Method
cpg	765.51	J/mol×K	886.72	Joback Method
cpg	776.69	J/mol×K	915.81	Joback Method

cpg	787.31	J/mol×K	944.89	Joback Method

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C136265&Units=SI
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

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