N,N'-Bis-(2-hydroxyethyl)-oxamide

Other names:	Ethanediamide, N,N'-bis(2-hydroxyethyl)-
	N,N'-bis(2-hydroxyethyl)oxamide
	N,N-Bis(2-hydroxyethyl)oxamide
	Oxamide, N,N'-bis(2-hydroxyethyl)-
Inchi:	InChI=1S/C6H12N2O4/c9-3-1-7-5(11)6(12)8-2-4-10/h9-10H,1-4H2,(H,7,11)(H,8,12)
InchiKey:	FPQJEXTVQZHURJ-UHFFFAOYSA-N
Formula:	C6H12N2O4
SMILES:	O=C(NCCO)C(=O)NCCO
Mol. weight [g/mol]:	176.17
CAS:	1871-89-2

Physical Properties

Property code	Value	Unit	Source
gf	-353.06	kJ/mol	Joback Method
hf	-589.85	kJ/mol	Joback Method
hfus	32.87	kJ/mol	Joback Method
hvap	88.67	kJ/mol	Joback Method
log10ws	-0.11		Aqueous Solubility Prediction Method
logp	-2.797		Crippen Method
mcvol	130.240	ml/mol	McGowan Method
pc	4704.19	kPa	Joback Method
tb	729.12	K	Joback Method
tc	909.69	K	Joback Method
tf	484.20	K	Joback Method
vc	0.491	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	365.63	J/mol×K	729.12	Joback Method
cpg	373.03	J/mol×K	759.21	Joback Method
cpg	380.00	J/mol×K	789.31	Joback Method
cpg	386.56	J/mol×K	819.40	Joback Method

cpg	392.72	J/mol×K	849.50	Joback Method
cpg	398.50	J/mol×K	879.59	Joback Method
cpg	403.91	J/mol×K	909.69	Joback Method

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C1871892&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Joback Method:	https://en.wikipedia.org/wiki/Joback_method
Aqueous Solubility Prediction Method:	http://onschallenge.wikispaces.com/file/view/AqueousDataset002.xlsx/351826032/AqueousDa
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
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume