3,6-Dioxaoctane-1,8-diamine

Other names: 1,2-bis(2-aminoethoxy)ethane
3,6-dioxaoctamethylenediamine
Ethanamine, 2,2'-[1,2-ethanediylbis(oxy)]bis-
Inchi: InChI=1S/C6H16N2O2/c7-1-3-9-5-6-10-4-2-8/h1-8H2
InchiKey: IWBOPFCKHIJFMS-UHFFFAOYSA-N
Formula: C6H16N2O2
SMILES: NCCOCCOCCN
Mol. weight [g/mol]: 148.21

Physical Properties

Property code	Value	Unit	Source
af	0.6708		Cheméo Relay (1.0)
hf	-384.87	kJ/mol	Cheméo Relay (1.0)
hfus	24.07	kJ/mol	Joback Method
hvap	58.80	kJ/mol	NIST Webbook
ie	8.91	eV	Cheméo Relay (1.0)
logp	-1.063		Crippen Method
mcvol	127.100	ml/mol	McGowan Method
pc	3403.91	kPa	Joback Method
tb	515.19	K	Cheméo Relay (1.0)
tc	704.85	K	Cheméo Relay (1.0)
tf	242.47	K	Cheméo Relay (1.0)
vc	0.455	m3/kmol	Cheméo Relay (1.0)

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	311.78	J/mol×K	526.58	Joback Method
cpg	374.79	J/mol×K	716.93	Joback Method
cpg	365.39	J/mol×K	685.20	Joback Method
cpg	355.55	J/mol×K	653.48	Joback Method
cpg	345.26	J/mol×K	621.75	Joback Method
cpg	334.53	J/mol×K	590.03	Joback Method
cpg	323.37	J/mol×K	558.30	Joback Method

hvapt	56.20	kJ/mol	323.00	NIST Webbook
pvap	0.03	kPa	322.91	Experimental vapor pressures of 1,2-bis(dimethylamino)ethane, 1-methylmorpholine, 1,2-bis(2-aminoethoxy)ethane and N-benzylethanolamine between 273.18 and 364.97K
pvap	0.18	kPa	353.02	Experimental vapor pressures of 1,2-bis(dimethylamino)ethane, 1-methylmorpholine, 1,2-bis(2-aminoethoxy)ethane and N-benzylethanolamine between 273.18 and 364.97K
pvap	0.10	kPa	342.89	Experimental vapor pressures of 1,2-bis(dimethylamino)ethane, 1-methylmorpholine, 1,2-bis(2-aminoethoxy)ethane and N-benzylethanolamine between 273.18 and 364.97K
pvap	0.05	kPa	332.89	Experimental vapor pressures of 1,2-bis(dimethylamino)ethane, 1-methylmorpholine, 1,2-bis(2-aminoethoxy)ethane and N-benzylethanolamine between 273.18 and 364.97K
pvap	3.58e-03	kPa	292.92	Experimental vapor pressures of 1,2-bis(dimethylamino)ethane, 1-methylmorpholine, 1,2-bis(2-aminoethoxy)ethane and N-benzylethanolamine between 273.18 and 364.97K
pvap	0.02	kPa	312.87	Experimental vapor pressures of 1,2-bis(dimethylamino)ethane, 1-methylmorpholine, 1,2-bis(2-aminoethoxy)ethane and N-benzylethanolamine between 273.18 and 364.97K

pvap	7.57e-03	kPa	302.88	Experimental vapor pressures of 1,2-bis(dimethylamino)ethane, 1-methylmorpholine, 1,2-bis(2-aminoethoxy)ethane and N-benzylethanolamine between 273.18 and 364.97K

Sources

Experimental vapor pressures of 1,2-bis(dimethylamino)ethane, 1-methylmorpholine, 1,2-bis(2-aminoethoxy)ethane and N-benzylethanolamine between 273.18 and 364.97K:	https://www.doi.org/10.1016/j.fluid.2009.04.006
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Phase equilibrium properties of binary aqueous solutions of benzylamine, 1,2-bis(2-aminoethoxy)ethane, or 2-[2-(dimethylamino)ethoxy]ethanol:	https://www.doi.org/10.1016/j.jct.2010.07.008
Joback Method:	https://en.wikipedia.org/wiki/Joback_method
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Cheméo Relay (1.0):	
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C929599&Units=SI
Cheméo Relay (1.0, beta):	

Legend

af:	Acentric Factor
cpg:	Ideal gas heat capacity
hf:	Enthalpy of formation at standard conditions
hfus:	Enthalpy of fusion at standard conditions
hvap:	Enthalpy of vaporization at standard conditions
hvapt:	Enthalpy of vaporization at a given temperature
ie:	Ionization energy
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
pc:	Critical Pressure
pvap:	Vapor pressure
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume