(Dimethylamino)acetic acid

Other names:	N,N-dimethylaminoacetic acid
	N,N-dimethylglycine
	N-methylsarcosine
	dimethylglycine
	glycine, N,N-dimethyl-
Inchi:	InChI=1S/C4H9NO2/c1-5(2)3-4(6)7/h3H2,1-2H3,(H,6,7)
InchiKey:	FFDGPVCHZBVARC-UHFFFAOYSA-N
Formula:	C4H9NO2
SMILES:	CN(C)CC(=O)O
Mol. weight [g/mol]:	103.12

Physical Properties

Property code	Value	Unit	Source
af	0.6180		Cheméo Relay (1.0)
gf	-172.16	kJ/mol	Joback Method
hf	-375.63	kJ/mol	Cheméo Relay (1.0)
hfus	14.82	kJ/mol	Joback Method
hvap	60.04	kJ/mol	Cheméo Relay (1.0)
ie	8.01	eV	Cheméo Relay (1.0)
logp	-0.367		Crippen Method
mcvol	84.640	ml/mol	McGowan Method
pc	4762.81	kPa	Joback Method
tb	445.50	K	Cheméo Relay (1.0)
tc	632.39	K	Cheméo Relay (1.0)
tf	328.73	K	Cheméo Relay (1.0)
vc	0.311	m3/kmol	Cheméo Relay (1.0)

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	174.61	J/mol×K	449.41	Joback Method
cpg	182.27	J/mol×K	478.12	Joback Method
cpg	189.58	J/mol×K	506.82	Joback Method
cpg	196.56	J/mol×K	535.53	Joback Method

cpg	203.20	J/mol×K	564.24	Joback Method
cpg	209.54	J/mol×K	592.95	Joback Method
cpg	215.56	J/mol×K	621.65	Joback Method

Sources

The hydration of the protein stabilizing agents: Trimethylamine-N-oxide, glycine and its N-methylderivatives	https://www.doi.org/10.1016/j.jct.2013.01.023
Joback Method:	https://en.wikipedia.org/wiki/Joback_method
The volumetric and compressibility studies:	http://link.springer.com/article/10.1007/BF02311772
McGowan Method:	
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Cheméo Relay (1.0):	
Cheméo Relay (1.0, beta):	
Compatible solutes: Thermodynamic properties relevant for effective protection against osmotic stress:	https://www.doi.org/10.1016/j.fluid.2015.07.004

Legend

af:	Acentric Factor
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
ie:	Ionization energy
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