

1,1-Cyclopentanediacetamide

Other names:	3,3-Tetramethyleneglutarimide 8-Azaspiro[4.5]decane-7,9-dione
Inchi:	InChI=1S/C9H13NO2/c11-7-5-9(3-1-2-4-9)6-8(12)10-7/h1-6H2,(H,10,11,12)
InchiKey:	YRTHJMQKDCXPAY-UHFFFAOYSA-N
Formula:	C9H13NO2
SMILES:	O=C1CC2(CCCC2)CC(=O)N1
Mol. weight [g/mol]:	167.21
CAS:	1075-89-4

Physical Properties

Property code	Value	Unit	Source
gf	-57.25	kJ/mol	Joback Method
hf	-310.14	kJ/mol	Joback Method
hfus	8.18	kJ/mol	Joback Method
hsub	106.80 ± 2.00	kJ/mol	NIST Webbook
hvap	50.55	kJ/mol	Joback Method
log10ws	-1.88		Crippen Method
logp	0.983		Crippen Method
mcvol	129.070	ml/mol	McGowan Method
pc	4167.71	kPa	Joback Method
tb	624.98	K	Joback Method
tc	898.79	K	Joback Method
tf	482.60	K	Joback Method
vc	0.471	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	351.46	J/molxK	624.98	Joback Method
cpg	370.22	J/molxK	670.62	Joback Method
cpg	387.84	J/molxK	716.25	Joback Method
cpg	404.46	J/molxK	761.89	Joback Method
cpg	420.22	J/molxK	807.52	Joback Method
cpg	435.26	J/molxK	853.16	Joback Method

cpg	449.72	J/mol×K	898.79	Joback Method
hfust	24.20	kJ/mol	426.60	NIST Webbook

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C1075894&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci9903071
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
hfust:	Enthalpy of fusion at a given temperature
hsub:	Enthalpy of sublimation 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

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