

Glycine, N-acetyl-

Other names:	2-(Acetylamino)acetic acid 2-Acetamidoacetic acid Acetylaminoacetic acid Acetylglycine Acetylglycocol <chem>CH3CONHCH2COOH</chem> Ethanoylaminoethanoic acid N-acetylglycine NSC 7605 acetamidoacetic acid aceturic acid
Inchi:	<chem> InChI=1S/C4H7NO3/c1-3(6)5-2-4(7)8/h2H2,1H3,(H,5,6)(H,7,8)</chem>
InchiKey:	<chem>OKJIRPAQVSHGFK-UHFFFAOYSA-N</chem>
Formula:	<chem>C4H7NO3</chem>
SMILES:	<chem>CC(=O)NCC(=O)O</chem>
Mol. weight [g/mol]:	117.10
CAS:	543-24-8

Physical Properties

Property code	Value	Unit	Source
gf	-322.47	kJ/mol	Joback Method
hf	-449.81	kJ/mol	Joback Method
hfus	18.50	kJ/mol	Joback Method
hvap	61.11	kJ/mol	Joback Method
ie	9.40	eV	NIST Webbook
ie	9.80	eV	NIST Webbook
log10ws	0.44		Crippen Method
logp	-0.793		Crippen Method
mcvol	86.210	ml/mol	McGowan Method
pc	5320.16	kPa	Joback Method
rinpol	1382.20		NIST Webbook
tb	541.01	K	Joback Method
tc	727.20	K	Joback Method
tf	348.18	K	Joback Method
vc	0.326	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	192.24	J/mol×K	541.01	Joback Method
cpg	198.82	J/mol×K	572.04	Joback Method
cpg	205.07	J/mol×K	603.07	Joback Method
cpg	211.00	J/mol×K	634.11	Joback Method
cpg	216.62	J/mol×K	665.14	Joback Method
cpg	221.93	J/mol×K	696.17	Joback Method
cpg	226.95	J/mol×K	727.20	Joback Method
hsubt	127.00 ± 1.00	kJ/mol	389.00	NIST Webbook

Sources

Effect of N-acetylglycine on volumetric and acoustic behaviour of aqueous sucrose solutions in the presence of N-acetyl glycine
Solute-solvent interactions of N-acetyl glycine in aqueous sucrose solutions: interactions of N-acetyl glycine in aqueous sucrose solutions at different temperatures:
Effect of N-acetylglycine on volumetric, acoustic and viscometric behaviour of aqueous lactam penicillin solutions:

<https://www.doi.org/10.1016/j.jct.2015.12.023>

<https://www.doi.org/10.1016/j.tca.2015.03.015>

<https://www.doi.org/10.1016/j.tca.2014.05.014>

<http://link.springer.com/article/10.1007/BF02311772>

<https://www.doi.org/10.1016/j.tca.2014.03.013>

https://en.wikipedia.org/wiki/Joback_method

NIST Webbook:

<http://webbook.nist.gov/cgi/cbook.cgi?ID=C543248&Units=SI>

Crippen Method:

<http://pubs.acs.org/doi/abs/10.1021/ci9903071>

Crippen Method:

https://www.chemeo.com/doc/models/crippen_log10ws

Volumetric, acoustic and viscometric behaviour of dipotassium hydrogen phosphonate and sodium N-acetyl glycine in aqueous solution of dipotassium hydrogen phosphonate and aqueous solutions prepared at temperature interval (20-80)°C to determine volume and acoustic solutions of N-acetyl glycine at different temperatures:

<https://www.doi.org/10.1016/j.jct.2015.10.017>

<https://www.doi.org/10.1016/j.jct.2015.10.022>

<https://www.doi.org/10.1016/j.jct.2012.12.022>

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
- hsubt:** Enthalpy of sublimation at a given temperature
- hvap:** Enthalpy of vaporization at standard conditions
- ie:** Ionization energy

log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mvol:	McGowan's characteristic volume
pc:	Critical Pressure
rinp0l:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

Latest version available from:

<https://www.chemeo.com/cid/64-133-3/Glycine-N-acetyl.pdf>

Generated by Cheméo on 2024-04-10 18:55:39.405287179 +0000 UTC m=+15064588.325864495.

Cheméo (<https://www.chemeo.com>) is the biggest free database of chemical and physical data for the process industry.