1.2-diacetylhydrazine

Other names: N,N'-Diacetylhydrazine
1,2-Diacetylhydrazine
Acetic acid, 2-acetylhydrazide
Hydrazine, 1,2-diacetyl-
NSC 42939
Inchi: InChI=1S/C4H8N2O2/c1-3(7)5-6-4(2)8/h1-2H3,(H,5,7)(H,6,8)
InchiKey: ZLHNYIHIHQEHJQ-UHFFFAOYSA-N
Formula: C4H8N2O2
SMILES: CC(=O)NNC(C)=O
Mol. weight [g/mol]: 116.12
CAS: 3148-73-0

Physical Properties

Property code	Value	Unit	Source
gf	-96.26	kJ/mol	Joback Method
hf	-244.11	kJ/mol	Joback Method
hfus	19.51	kJ/mol	Joback Method
hvap	50.86	kJ/mol	Joback Method
log10ws	-0.42		Crippen Method
logp	-0.826		Crippen Method
mcvol	90.320	ml/mol	McGowan Method
pc	4756.24	kPa	Joback Method
tb	499.00	K	Joback Method
tc	698.04	K	Joback Method
tf	340.02	K	Joback Method
vc	0.342	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	192.93	J/mol×K	499.00	Joback Method
cpg	201.23	J/mol×K	532.17	Joback Method
cpg	209.10	J/mol×K	565.35	Joback Method
cpg	216.57	J/mol×K	598.52	Joback Method

cpg	223.63	J/mol×K	631.70	Joback Method
cpg	230.30	J/mol×K	664.87	Joback Method
cpg	236.58	J/mol×K	698.04	Joback Method
hsubt	103.10 ± 1.70	kJ/mol	352.50	NIST Webbook

Sources

McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C3148730&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Joback Method:	https://en.wikipedia.org/wiki/Joback_method

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
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