1,2-Hydrazinedicarboxaldehyde

Other names:	Hydrazine, 1,2-diformyl- s-Diformylhydrazine Bicarbamaldehyde Diformylhydrazine N,N'-Diformylhydrazine 1,2-Diformylhydrazine s-Diformohydrazide Diformohydrazide Formic acid, hydrazodi- 1,2-Diformylhydrazin NSC 54729 hydrazodicarbaldehyde
Inchi:	InChI=1S/C2H4N2O2/c5-1-3-4-2-6/h1-2H,(H,3,5)(H,4,6)
InchiKey:	POVXOWVFLAAVBH-UHFFFAOYSA-N
Formula:	C2H4N2O2
SMILES:	O=CNNC=O
Mol. weight [g/mol]:	88.07
CAS:	628-36-4

Physical Properties

Property code	Value	Unit	Source
chs	-1027.70 ± 0.70	kJ/mol	NIST Webbook
gf	-54.30	kJ/mol	Joback Method
hf	-148.83	kJ/mol	Joback Method
hfs	-331.00 ± 0.70	kJ/mol	NIST Webbook
hfus	15.71	kJ/mol	Joback Method
hsub	205.10 ± 0.70	kJ/mol	NIST Webbook
hsub	100.80 ± 0.54	kJ/mol	NIST Webbook
hvap	46.36	kJ/mol	Joback Method
log10ws	0.42		Crippen Method
logp	-1.607		Crippen Method
mcvol	62.140	ml/mol	McGowan Method
pc	6545.80	kPa	Joback Method
tb	442.82	K	Joback Method
tc	636.32	K	Joback Method
tf	301.62	K	Joback Method
vc	0.252	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	126.88	J/mol×K	475.07	Joback Method
cpg	131.76	J/mol×K	507.32	Joback Method
cpg	136.38	J/mol×K	539.57	Joback Method
cpg	140.75	J/mol×K	571.82	Joback Method
cpg	144.88	J/mol×K	604.07	Joback Method
cpg	121.74	J/mol×K	442.82	Joback Method
cpg	148.76	J/mol×K	636.32	Joback Method
cps	99.12	J/mol×K	298.15	NIST Webbook
hsubt	205.10	kJ/mol	356.00	NIST Webbook
hsubt	205.10 ± 0.70	kJ/mol	356.50	NIST Webbook
hsubt	100.80	kJ/mol	386.50	NIST Webbook
ssubt	291.00	J/mol×K	356.00	NIST Webbook

Sources

McGowan Method: http://link.springer.com/article/10.1007/BF02311772
NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C628364&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

chs: Standard solid enthalpy of combustion
cpg: Ideal gas heat capacity
cps: Solid phase heat capacity
gf: Standard Gibbs free energy of formation
hf: Enthalpy of formation at standard conditions
hfs: Solid phase enthalpy of formation at standard conditions
hfus: Enthalpy of fusion at standard conditions
hsub: Enthalpy of sublimation 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
ssubt:	Entropy of sublimation at a given temperature
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume