

Malonic acid, dihydrazide

Other names:	Propanedioyl dihydrazide Malonhydrazide Malonic acid hydrazide Malonic dihydrazide Malonyl dihydrazide Malonyl hydrazide Propanedioic acid, dihydrazide Malondihydrazide
Inchi:	InChI=1S/C3H8N4O2/c4-6-2(8)1-3(9)7-5/h1,4-5H2,(H,6,8)(H,7,9)
InchiKey:	PSIKPHJLTVSQFO-UHFFFAOYSA-N
Formula:	C3H8N4O2
SMILES:	NNC(=O)CC(=O)NN
Mol. weight [g/mol]:	132.12
CAS:	3815-86-9

Physical Properties

Property code	Value	Unit	Source
chs	-1991.20 ± 0.54	kJ/mol	NIST Webbook
chs	-1992.90 ± 0.54	kJ/mol	NIST Webbook
gf	28.22	kJ/mol	Joback Method
hf	-155.89	kJ/mol	Joback Method
hfus	27.32	kJ/mol	Joback Method
hvap	69.92	kJ/mol	Joback Method
log10ws	0.14		Crippen Method
logp	-2.644		Crippen Method
mcvol	96.190	ml/mol	McGowan Method
pc	6503.64	kPa	Joback Method
tb	621.18	K	Joback Method
tc	841.24	K	Joback Method
tf	495.27	K	Joback Method
vc	0.344	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	243.11	J/mol×K	621.18	Joback Method
cpg	250.59	J/mol×K	657.86	Joback Method
cpg	257.56	J/mol×K	694.53	Joback Method
cpg	264.03	J/mol×K	731.21	Joback Method
cpg	270.03	J/mol×K	767.89	Joback Method
cpg	275.57	J/mol×K	804.57	Joback Method
cpg	280.66	J/mol×K	841.24	Joback Method

Sources

Joback Method:	https://en.wikipedia.org/wiki/Joback_method
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C3815869&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.cheméo.com/doc/models/crippen_log10ws

Legend

chs:	Standard solid enthalpy of combustion
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
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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