Piperazine, 1,4-dinitroso-

Other names:	N,N'-Dinitrosopiperazine
	1,4-Dinitrosopiperazine
	Dinitrosopiperazin
	Dinitrosopiperazine
	NSC 339
	USAF do-36
	Dnpz
Inchi:	InChI=1S/C4H8N4O2/c9-5-7-1-2-8(6-10)4-3-7/h1-4H2
InchiKey:	WNSYEWGYAFFSSQ-UHFFFAOYSA-N
Formula:	C4H8N4O2
SMILES:	O=NN1CCN(N=O)CC1
Mol. weight [g/mol]:	144.13
CAS:	140-79-4

Physical Properties

Property code	Value	Unit	Source
chs	-2810.00 ± 2.00	kJ/mol	NIST Webbook
hf	194.00 ± 3.00	kJ/mol	NIST Webbook
hfs	93.00 ± 2.00	kJ/mol	NIST Webbook
hsub	101.00 ± 0.80	kJ/mol	NIST Webbook
log10ws	-0.90		Crippen Method
logp	-0.033		Crippen Method
mcvol	99.420	ml/mol	McGowan Method
tf	429.15 ± 1.50	K	NIST Webbook

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
hsubt	101.00 ± 8.00	kJ/mol	342.50	NIST Webbook

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C140794&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772

Legend

chs:	Standard solid enthalpy of combustion
hf:	Enthalpy of formation at standard conditions
hfs:	Solid phase enthalpy of formation at standard conditions
hsub:	Enthalpy of sublimation at standard conditions
hsubt:	Enthalpy of sublimation at a given temperature
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
tf:	Normal melting (fusion) point