

Hydrazine, (2,4-dinitrophenyl)-

Other names:	(2,4-Dinitrophenyl)hydrazine 1-Hydrazino-2,4-dinitrobenzene DNP-hydrazine 2,4-Dinitrofenylhydrazin 2,4-DNPH 1-(2,4-Dinitrophenyl)hydrazine NSC 5709
Inchi:	InChI=1S/C6H6N4O4/c7-8-5-2-1-4(9(11)12)3-6(5)10(13)14/h1-3,8H,7H2
InchiKey:	HORQAOAYAYGIBM-UHFFFAOYSA-N
Formula:	C6H6N4O4
SMILES:	NNc1ccc([N+](=O)[O-])cc1[N+](=O)[O-]
Mol. weight [g/mol]:	198.14
CAS:	119-26-6

Physical Properties

Property code	Value	Unit	Source
chs	-3268.50 ± 3.30	kJ/mol	NIST Webbook
chs	-3272.60	kJ/mol	NIST Webbook
chs	-3330.00	kJ/mol	NIST Webbook
gf	319.73	kJ/mol	Joback Method
hf	112.16	kJ/mol	Joback Method
hfs	116.00	kJ/mol	NIST Webbook
hfs	54.02	kJ/mol	NIST Webbook
hfs	49.90 ± 3.30	kJ/mol	NIST Webbook
hfus	37.58	kJ/mol	Joback Method
hvap	82.81	kJ/mol	Joback Method
log10ws	-2.79		Crippen Method
logp	0.789		Crippen Method
mcvol	126.440	ml/mol	McGowan Method
pc	5109.34	kPa	Joback Method
tb	799.70	K	Joback Method
tc	1078.00	K	Joback Method
tf	631.98	K	Joback Method
vc	0.491	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	341.12	J/mol×K	799.70	Joback Method
cpg	349.08	J/mol×K	846.08	Joback Method
cpg	356.18	J/mol×K	892.47	Joback Method
cpg	362.46	J/mol×K	938.85	Joback Method
cpg	367.98	J/mol×K	985.23	Joback Method
cpg	372.81	J/mol×K	1031.61	Joback Method
cpg	377.00	J/mol×K	1078.00	Joback Method
hfust	18.89	kJ/mol	474.10	NIST Webbook

Sources

Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
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=C119266&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l

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
hfs:	Solid phase enthalpy of formation at standard conditions
hfus:	Enthalpy of fusion at standard conditions
hfust:	Enthalpy of fusion 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

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