Propionic acid, 2-(2,4-dinitrophenyl) hydrazide

Inchi: InChI=1S/C9H10N4O5/c1-2-9(14)11-10-7-4-3-6(12(15)16)5-8(7)13(17)18/h3-5,10H,2H2,
InchiKey: WHZKXONNRZZZSH-UHFFFAOYSA-N
Formula: C9H10N4O5
SMILES: CCC(=O)NNc1ccc([N+](=O)[O-])cc1[N+](=O)[O-]
Mol. weight [g/mol]: 254.20
CAS: 6561-63-3

Physical Properties

Property code	Value	Unit	Source
gf	239.01	kJ/mol	Joback Method
hf	-42.66	kJ/mol	Joback Method
hfus	46.85	kJ/mol	Joback Method
hvap	92.03	kJ/mol	Joback Method
log10ws	-3.57		Crippen Method
logp	1.356		Crippen Method
mcvol	170.280	ml/mol	McGowan Method
pc	3594.25	kPa	Joback Method
tb	899.85	K	Joback Method
tc	1156.98	K	Joback Method
tf	685.12	K	Joback Method
vc	0.671	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	496.15	J/mol×K	899.85	Joback Method
cpg	504.53	J/mol×K	942.70	Joback Method
cpg	511.98	J/mol×K	985.56	Joback Method
cpg	518.58	J/mol×K	1028.41	Joback Method
cpg	524.38	J/mol×K	1071.27	Joback Method
cpg	529.43	J/mol×K	1114.12	Joback Method
cpg	533.80	J/mol×K	1156.98	Joback Method

Sources

McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C6561633&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
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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