Hydrazinecarboxamide, N,N-diphenyl-

Other names: Semicarbazide, 4,4-diphenyl-
4,4-Diphenylsemicarbazide
Inchi: InChI=1S/C13H13N3O/c14-15-13(17)16(11-7-3-1-4-8-11)12-9-5-2-6-10-12/h1-10H,14H2
InchiKey: VVVFQQJJJRFDTE-UHFFFAOYSA-N
Formula: C13H13N3O
SMILES: NNC(=O)N(c1ccccc1)c1ccccc1
Mol. weight [g/mol]: 227.26
CAS: 603-51-0

Physical Properties

Property code	Value	Unit	Source
gf	421.10	kJ/mol	Joback Method
hf	203.62	kJ/mol	Joback Method
hfus	32.42	kJ/mol	Joback Method
hvap	74.95	kJ/mol	Joback Method
log10ws	-3.54		Crippen Method
logp	2.408		Crippen Method
mcvol	178.020	ml/mol	McGowan Method
pc	3572.80	kPa	Joback Method
tb	739.21	K	Joback Method
tc	988.87	K	Joback Method
tf	507.43	K	Joback Method
vc	0.635	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	486.86	J/mol×K	739.21	Joback Method
cpg	500.28	J/mol×K	780.82	Joback Method
cpg	512.45	J/mol×K	822.43	Joback Method
cpg	523.47	J/mol×K	864.04	Joback Method
cpg	533.47	J/mol×K	905.65	Joback Method
cpg	542.54	J/mol×K	947.26	Joback Method
cpg	550.79	J/mol×K	988.87	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=C603510&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws

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