Urea, N,N-diphenyl-

Other names:	Diphenyl urea
	Urea, 1,1-diphenyl-
	1,1-Diphenylurea
	Asym-diphenylurea
Inchi:	InChI=1S/C13H12N2O/c14-13(16)15(11-7-3-1-4-8-11)12-9-5-2-6-10-12/h1-10H,(H2,14,1
InchiKey:	XKAFKUGMXFMRCC-UHFFFAOYSA-N
Formula:	C13H12N2O
SMILES:	NC(=O)N(c1ccccc1)c1ccccc1
Mol. weight [g/mol]:	212.25
CAS:	603-54-3

Physical Properties

Property code	Value	Unit	Source
chs	-6782.70	kJ/mol	NIST Webbook
chs	-6707.90 ± 3.30	kJ/mol	NIST Webbook
gf	331.71	kJ/mol	Joback Method
hf	150.15	kJ/mol	Joback Method
hfs	-54.40	kJ/mol	NIST Webbook
hfs	-122.70 ± 3.40	kJ/mol	NIST Webbook
hfus	27.33	kJ/mol	Joback Method
hvap	68.51	kJ/mol	Joback Method
log10ws	-3.36		Crippen Method
logp	2.903		Crippen Method
mcvol	168.040	ml/mol	McGowan Method
pc	3517.91	kPa	Joback Method
tb	689.04	K	Joback Method
tc	942.43	K	Joback Method
tf	463.60 ± 0.00	K	NIST Webbook
vc	0.601	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	437.23	J/mol×K	689.04	Joback Method

cpg	451.53	J/mol×K	731.27	Joback Method
cpg	464.50	J/mol×K	773.50	Joback Method
cpg	476.26	J/mol×K	815.73	Joback Method
cpg	486.91	J/mol×K	857.97	Joback Method
cpg	496.56	J/mol×K	900.20	Joback Method
cpg	505.31	J/mol×K	942.43	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=C603543&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.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
hfs:	Solid phase 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