Imidodicarbonimidic diamide, N-(2-phenylethyl)-

Other names:	1-phenethylbiguanide
	Biguanide, 1-phenethyl-
	Cronoformin
	DB Comb
	DB-retard
	DBI
	Diabis
	Dibiraf
	Dibotin
	Fenfoduron
	Fenformin
	Fenformina
	Fenormin
	Glukopostin
	Glyphen
	N'-«beta»-Fenetilformamidiniliminourea
	N'-«beta»-Phenethylformamidinylliminourea
	N-(2-phenylethyl)imidodicarbonimidic diamide
	NCI-C01741
	PEDG
	Phenethyldiguanide
	Phenformin
	Phenformine
	Phenformix
	Phenylethylbiguanide
	Retardo
	W 32
	debeone
	«beta»-PEBG
	«beta»-Phenethylbiguanide
Inchi:	InChI=1S/C10H15N5/c11-9(12)15-10(13)14-7-6-8-4-2-1-3-5-8/h1-5H,6-7H2,(H6,11,12,13
InchiKey:	ICFJFFQQTFMIBG-UHFFFAOYSA-N
Formula:	C10H15N5
SMILES:	N=C(N)NC(=N)NCCc1ccccc1
Mol. weight [g/mol]:	205.26
CAS:	114-86-3

Physical Properties

Property code	Value	Unit	Source
gf	798.16	kJ/mol	Joback Method
hf	524.19	kJ/mol	Joback Method
hvap	87.80	kJ/mol	Joback Method
log10ws	-4.74		Crippen Method
logp	0.237		Crippen Method
mcvol	169.300	ml/mol	McGowan Method
tb	796.43	K	Joback Method
tf	555.02	K	Joback Method
tt	446.85	K	Thermodynamic Solubility and Mixing Properties of Phenformin in 14 Pure Solvents at Temperatures Ranging from 278.15 to 323.15 K

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	495.40	J/mol×K	796.43	Joback Method
cpg	42.66	J/mol×K	100.12	Joback Method
cpg	42.66	J/mol×K	100.12	Joback Method
cpg	42.66	J/mol×K	100.12	Joback Method
cpg	42.66	J/mol×K	100.12	Joback Method
cpg	42.66	J/mol×K	100.12	Joback Method
cpg	42.66	J/mol×K	100.12	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=C114863&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Thermodynamic Solubility and Mixing Properties of Phenformin in 14 Pure Solvents at Temperatures Ranging from 278.15 to 323.15 K:	https://www.doi.org/10.1021/acs.jced.9b00844

Legend

cpg:	Ideal gas heat capacity
gf:	Standard Gibbs free energy of formation
hf:	Enthalpy of formation 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
tb:	Normal Boiling Point Temperature
tf:	Normal melting (fusion) point
tt:	Triple Point Temperature