N,N'-di-sec-Butyl-p-phenylenediamine

Other names:	1,4-Bis(sec-butylamino)benzene 1,4-Benzenediamine, N,N'-bis(1-methylpropyl)- p-Phenylenediamine, N,N'-di-sec-butyl- Antioxidant 22 Du Pont Gasoline Antioxidant No. 22 N,N'-Di-sec-butyl-p-phenyldiamine N,N'-Di-sec-butylparaphenylenediamine Tenamene 2 Topanol M N,N'-Di-sek.butyl-p-fenylendiamin N,N'-Di-s-butyl-p-phenylenediamine N,N'-Di-sec-butyl-1,4-benzenediamine Kerobit BPD N,N'-Bis(1-methylpropyl)-1,4-benzenediamine Naugalube 403 1,4-Benzenediamine, N1,N4-bis(1-methylpropyl)- NSC 68417 Santoflex 44 UOP 5
Inchi:	InChI=1S/C14H24N2/c1-5-11(3)15-13-7-9-14(10-8-13)16-12(4)6-2/h7-12,15-16H,5-6H2,1
InchiKey:	FSWDLYNGJBGFJH-UHFFFAOYSA-N
Formula:	C14H24N2
SMILES:	CCC(C)Nc1ccc(NC(C)CC)cc1
Mol. weight [g/mol]:	220.35
CAS:	101-96-2

Physical Properties

Property code	Value	Unit	Source
gf	343.68	kJ/mol	Joback Method
hf	-10.85	kJ/mol	Joback Method
hfus	28.82	kJ/mol	Joback Method
hvap	61.79	kJ/mol	Joback Method
log10ws	-4.22		Crippen Method
logp	4.107		Crippen Method
mcvol	204.320	ml/mol	McGowan Method
pc	2058.62	kPa	Joback Method
tb	650.84	K	Joback Method

tc	854.64	K	Joback Method
tf	361.80	K	Joback Method
vc	0.769	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	557.00	J/mol×K	650.84	Joback Method
cpg	574.64	J/mol×K	684.81	Joback Method
cpg	591.25	J/mol×K	718.77	Joback Method
cpg	606.88	J/mol×K	752.74	Joback Method
cpg	621.57	J/mol×K	786.71	Joback Method
cpg	635.36	J/mol×K	820.68	Joback Method
cpg	648.29	J/mol×K	854.64	Joback Method
hvapt	70.30	kJ/mol	438.50	NIST Webbook

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	396.00 ± 1.00	K	0.00	NIST Webbook

Sources

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
McGowan Method: http://link.springer.com/article/10.1007/BF02311772
NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C101962&Units=SI

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
hvapt:	Enthalpy of vaporization at a given temperature
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
tbrp:	Boiling point at reduced pressure
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume