2-Butene-1,4-diamine, N,N'-diethyl-

Other names: N,N'-Diethyl-2-butene-1,4-diamine
N,N'-diethylbut-2-enylenediamine
Inchi: InChI=1S/C8H18N2/c1-3-9-7-5-6-8-10-4-2/h5-6,9-10H,3-4,7-8H2,1-2H3/b6-5+
InchiKey: YWWSWEIXJXYQJB-AATRIKPKSA-N
Formula: C8H18N2
SMILES: CCNCC=CCNCC
Mol. weight [g/mol]: 142.24
CAS: 112-21-0

Physical Properties

Property code	Value	Unit	Source
gf	275.48	kJ/mol	Joback Method
hf	15.71	kJ/mol	Joback Method
hfus	26.88	kJ/mol	Joback Method
hvap	46.23	kJ/mol	Joback Method
log10ws	-1.40		Crippen Method
logp	0.762		Crippen Method
mcvol	139.240	ml/mol	McGowan Method
pc	2746.90	kPa	Joback Method
tb	486.94	K	Joback Method
tc	666.65	K	Joback Method
tf	280.16	K	Joback Method
vc	0.533	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	312.04	J/mol×K	486.94	Joback Method
cpg	325.72	J/mol×K	516.89	Joback Method
cpg	338.76	J/mol×K	546.84	Joback Method
cpg	351.19	J/mol×K	576.79	Joback Method
cpg	363.03	J/mol×K	606.75	Joback Method
cpg	374.30	J/mol×K	636.70	Joback Method
cpg	385.03	J/mol×K	666.65	Joback Method

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	354.70	K	1.00	NIST Webbook

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C112210&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
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772

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
tbrp:	Boiling point at reduced pressure
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume