

Naphthalene, decahydro-, 1,1'-bis

Inchi:	InChI=1S/C20H34/c1-3-11-17-15(7-1)9-5-13-19(17)20-14-6-10-16-8-2-4-12-18(16)20/h1
InchiKey:	JXFVWHLVEZPNFX-UHFFFAOYSA-N
Formula:	C20H34
SMILES:	C1CCC2C(C1)CCCC2C1CCCC2CCCCC21
Mol. weight [g/mol]:	274.48

Physical Properties

Property code	Value	Unit	Source
gf	248.30	kJ/mol	Joback Method
hf	-254.89	kJ/mol	Joback Method
hfus	25.44	kJ/mol	Joback Method
hvap	60.52	kJ/mol	Joback Method
log10ws	-6.32		Crippen Method
logp	6.199		Crippen Method
mvol	249.220	ml/mol	McGowan Method
pc	1620.68	kPa	Joback Method
rinpol	2223.00		NIST Webbook
rinpol	2223.00		NIST Webbook
tb	708.78	K	Joback Method
tc	952.30	K	Joback Method
tf	350.28	K	Joback Method
vc	0.917	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	821.81	J/molxK	708.78	Joback Method
cpg	852.99	J/molxK	749.37	Joback Method
cpg	881.78	J/molxK	789.95	Joback Method
cpg	908.31	J/molxK	830.54	Joback Method
cpg	932.72	J/molxK	871.13	Joback Method
cpg	955.14	J/molxK	911.71	Joback Method
cpg	975.69	J/molxK	952.30	Joback Method
dvisc	0.0044172	Paxs	350.28	Joback Method

dvisc	0.0025276	Paxs	410.03	Joback Method
dvisc	0.0016670	Paxs	469.78	Joback Method
dvisc	0.0012077	Paxs	529.53	Joback Method
dvisc	0.0009341	Paxs	589.28	Joback Method
dvisc	0.0007574	Paxs	649.03	Joback Method
dvisc	0.0006363	Paxs	708.78	Joback Method

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=R479&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci9903071
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
dvisc:	Dynamic viscosity
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
rinpol:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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