

Naphthalene, decahydro-1-pentadecyl-

Other names:	1-Pentadecyldecahydronaphthalene
Inchi:	InChI=1S/C25H48/c1-2-3-4-5-6-7-8-9-10-11-12-13-14-18-23-20-17-21-24-19-15-16-22-25
InchiKey:	KAPWPCCFMBDURV-UHFFFAOYSA-N
Formula:	C25H48
SMILES:	CCCCCCCCCCCCCCCC1CCCC2CCCCC12
Mol. weight [g/mol]:	348.65
CAS:	66359-82-8

Physical Properties

Property code	Value	Unit	Source
gf	225.01	kJ/mol	Joback Method
hf	-458.71	kJ/mol	Joback Method
hfus	49.45	kJ/mol	Joback Method
hvap	71.45	kJ/mol	Joback Method
log10ws	-9.35		Crippen Method
logp	9.074		Crippen Method
mcvol	341.390	ml/mol	McGowan Method
pc	923.30	kPa	Joback Method
tb	797.29	K	Joback Method
tc	987.53	K	Joback Method
tf	389.07	K	Joback Method
vc	1.317	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1275.34	J/molxK	987.53	Joback Method
cpg	1256.75	J/molxK	955.82	Joback Method
cpg	1237.01	J/molxK	924.12	Joback Method
cpg	1216.06	J/molxK	892.41	Joback Method
cpg	1193.85	J/molxK	860.70	Joback Method
cpg	1170.29	J/molxK	829.00	Joback Method
cpg	1145.33	J/molxK	797.29	Joback Method
dvisc	0.0026523	Paxs	389.07	Joback Method

dvisc	0.0001394	Paxs	797.29	Joback Method
dvisc	0.0001811	Paxs	729.25	Joback Method
dvisc	0.0002484	Paxs	661.22	Joback Method
dvisc	0.0003663	Paxs	593.18	Joback Method
dvisc	0.0005973	Paxs	525.14	Joback Method
dvisc	0.0011264	Paxs	457.11	Joback Method
hvapt	93.40	kJ/mol	496.50	NIST Webbook

Sources

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
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C66359828&Units=SI

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
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
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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