

Naphthalene, decahydro-1-undecyl-

Other names:	1-Undecyldecahydronaphthalene
Inchi:	InChI=1S/C21H40/c1-2-3-4-5-6-7-8-9-10-14-19-16-13-17-20-15-11-12-18-21(19)20/h19-2
InchiKey:	PSFVHQPJROETNH-UHFFFAOYSA-N
Formula:	C21H40
SMILES:	CCCCCCCCCCCC1CCCC2CCCCC12
Mol. weight [g/mol]:	292.54
CAS:	66326-27-0

Physical Properties

Property code	Value	Unit	Source
gf	191.33	kJ/mol	Joback Method
hf	-376.15	kJ/mol	Joback Method
hfus	39.09	kJ/mol	Joback Method
hvap	62.55	kJ/mol	Joback Method
log10ws	-7.68		Crippen Method
logp	7.514		Crippen Method
mcvol	285.030	ml/mol	McGowan Method
pc	1183.34	kPa	Joback Method
tb	705.77	K	Joback Method
tc	896.85	K	Joback Method
tf	343.99	K	Joback Method
vc	1.093	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1022.59	J/molxK	896.85	Joback Method
cpg	1003.88	J/molxK	865.00	Joback Method
cpg	984.01	J/molxK	833.15	Joback Method
cpg	962.94	J/molxK	801.31	Joback Method
cpg	940.61	J/molxK	769.46	Joback Method
cpg	916.96	J/molxK	737.62	Joback Method
cpg	891.94	J/molxK	705.77	Joback Method
dvisc	0.0035081	Paxs	343.99	Joback Method

dvisc	0.0002188	Paxs	705.77	Joback Method
dvisc	0.0002800	Paxs	645.47	Joback Method
dvisc	0.0003769	Paxs	585.18	Joback Method
dvisc	0.0005432	Paxs	524.88	Joback Method
dvisc	0.0008608	Paxs	464.58	Joback Method
dvisc	0.0015649	Paxs	404.29	Joback Method
hvapt	83.30	kJ/mol	457.00	NIST Webbook

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=C66326270&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci9903071
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws

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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