Naphthalene, 1,2,3,4-tetrahydro-5,8-dimethyl-1-octyl-

Other names: 1,2,3,4-Tetrahydro-5,8-dimethyl-1-octylnaphthalene
Inchi: InChI=1S/C20H32/c1-4-5-6-7-8-9-11-18-12-10-13-19-16(2)14-15-17(3)20(18)19/h14-15,1
InchiKey: YGXXXFDZLBVJPP-UHFFFAOYSA-N
Formula: C20H32
SMILES: CCCCCCCCC1CCCc2c(C)ccc(C)c21
Mol. weight [g/mol]: 272.47
CAS: 55255-58-8

Physical Properties

Property code	Value	Unit	Source
gf	249.69	kJ/mol	Joback Method
hf	-187.37	kJ/mol	Joback Method
hfus	36.46	kJ/mol	Joback Method
hvap	64.46	kJ/mol	Joback Method
log10ws	-7.24		Crippen Method
logp	6.474		Crippen Method
mcvol	258.040	ml/mol	McGowan Method
pc	1374.80	kPa	Joback Method
tb	709.63	K	Joback Method
tc	909.89	K	Joback Method
tf	393.56	K	Joback Method
vc	0.997	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	866.81	J/mol×K	909.89	Joback Method
cpg	851.09	J/mol×K	876.52	Joback Method
cpg	834.43	J/mol×K	843.14	Joback Method
cpg	816.79	J/mol×K	809.76	Joback Method
cpg	798.11	J/mol×K	776.38	Joback Method
cpg	778.33	J/mol×K	743.01	Joback Method
cpg	757.39	J/mol×K	709.63	Joback Method
dvisc	0.0014387	Pa×s	393.56	Joback Method

dvisc	0.0001939	Pa×s	709.63	Joback Method
dvisc	0.0002369	Pa×s	656.95	Joback Method
dvisc	0.0002996	Pa×s	604.27	Joback Method
dvisc	0.0003964	Pa×s	551.60	Joback Method
dvisc	0.0005563	Pa×s	498.92	Joback Method
dvisc	0.0008459	Pa×s	446.24	Joback Method
hvapt	78.60	kJ/mol	450.00	NIST Webbook

Sources

McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C55255588&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

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