

Naphthalene, 2-decyldECAhydro-

Inchi:	InChI=1S/C20H38/c1-2-3-4-5-6-7-8-9-12-18-15-16-19-13-10-11-14-20(19)17-18/h18-20H
InchiKey:	GJNBXCVAYSBL0Z-UHFFFAOYSA-N
Formula:	C20H38
SMILES:	CCCCCCCCCCC1CCC2CCCCC2C1
Mol. weight [g/mol]:	278.52
CAS:	54964-84-0

Physical Properties

Property code	Value	Unit	Source
gf	182.91	kJ/mol	Joback Method
hf	-355.51	kJ/mol	Joback Method
hfus	36.50	kJ/mol	Joback Method
hvap	60.32	kJ/mol	Joback Method
log10ws	-7.26		Crippen Method
logp	7.124		Crippen Method
mvol	270.940	ml/mol	McGowan Method
pc	1265.55	kPa	Joback Method
tb	682.89	K	Joback Method
tc	875.44	K	Joback Method
tf	332.72	K	Joback Method
vc	1.036	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	830.69	J/molxK	682.89	Joback Method
cpg	942.84	J/molxK	843.34	Joback Method
cpg	922.94	J/molxK	811.25	Joback Method
cpg	901.84	J/molxK	779.16	Joback Method
cpg	879.46	J/molxK	747.07	Joback Method
cpg	855.77	J/molxK	714.98	Joback Method
cpg	961.58	J/molxK	875.44	Joback Method
dvisc	0.0002419	Paxs	682.89	Joback Method
dvisc	0.0003081	Paxs	624.53	Joback Method

dvisc	0.0004125	Paxs	566.17	Joback Method
dvisc	0.0005906	Paxs	507.81	Joback Method
dvisc	0.0009282	Paxs	449.44	Joback Method
dvisc	0.0016693	Paxs	391.08	Joback Method
dvisc	0.0036887	Paxs	332.72	Joback Method

Sources

McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C54964840&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
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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