1-decylnaphthalene

Inchi: InChI=1S/C20H28/c1-2-3-4-5-6-7-8-9-13-18-15-12-16-19-14-10-11-17-20(18)19/h10-12,1
InchiKey: GDBCGGFNFKMPAE-UHFFFAOYSA-N
Formula: C20H28
SMILES: CCCCCCCCCCc1cccc2ccccc12
Mol. weight [g/mol]: 268.44
CAS: 26438-27-7

Physical Properties

Property code	Value	Unit	Source
gf	326.95	kJ/mol	Joback Method
hf	-40.00	kJ/mol	Joback Method
hfus	38.23	kJ/mol	Joback Method
hvap	64.69	kJ/mol	Joback Method
log10ws	-7.43		Crippen Method
logp	6.523		Crippen Method
mcvol	249.440	ml/mol	McGowan Method
pc	1505.81	kPa	Joback Method
tb	707.64	K	Joback Method
tc	910.03	K	Joback Method
tf	386.80	K	Joback Method
vc	0.970	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	706.22	J/mol×K	707.64	Joback Method
cpg	725.09	J/mol×K	741.37	Joback Method
cpg	742.87	J/mol×K	775.10	Joback Method
cpg	759.63	J/mol×K	808.83	Joback Method
cpg	775.44	J/mol×K	842.57	Joback Method
cpg	790.38	J/mol×K	876.30	Joback Method
cpg	804.51	J/mol×K	910.03	Joback Method
dvisc	0.0015940	Pa×s	386.80	Joback Method
dvisc	0.0008838	Pa×s	440.27	Joback Method

dvisc	0.0005568	Pa×s	493.75	Joback Method
dvisc	0.0003839	Pa×s	547.22	Joback Method
dvisc	0.0002829	Pa×s	600.69	Joback Method
dvisc	0.0002191	Pa×s	654.17	Joback Method
dvisc	0.0001763	Pa×s	707.64	Joback Method

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C26438277&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
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
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume