

Naphthalene, 5-(1-decylundecyl)-1,2,3,4-tetrahydro-

Other names: 5-(1-decylundecyl)-1,2,3,4-tetrahydronaphthalene

Inchi: InChI=1S/C31H54/c1-3-5-7-9-11-13-15-17-22-28(23-18-16-14-12-10-8-6-4-2)31-27-21-2

InchiKey: NOSJHDYQBWFGSJ-UHFFFAOYSA-N

Formula: C31H54

SMILES: CCCCCCCCCC(CCCCCCCCCC)c1cccc2c1CCCC2

Mol. weight [g/mol]: 426.76

CAS: 56282-45-2

Physical Properties

Property code	Value	Unit	Source
gf	357.21	kJ/mol	Joback Method
hf	-387.88	kJ/mol	Joback Method
hfus	60.75	kJ/mol	Joback Method
hvap	88.21	kJ/mol	Joback Method
log10ws	-11.69		Crippen Method
logp	10.711		Crippen Method
mcvol	413.030	ml/mol	McGowan Method
pc	731.65	kPa	Joback Method
tb	960.56	K	Joback Method
tc	1176.13	K	Joback Method
tf	494.25	K	Joback Method
vc	1.607	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1443.71	J/molxK	960.56	Joback Method
cpg	1467.21	J/molxK	996.49	Joback Method
cpg	1489.41	J/molxK	1032.42	Joback Method
cpg	1510.43	J/molxK	1068.35	Joback Method
cpg	1530.37	J/molxK	1104.28	Joback Method
cpg	1549.38	J/molxK	1140.20	Joback Method
cpg	1567.56	J/molxK	1176.13	Joback Method
dvisc	0.0007610	Paxs	494.25	Joback Method

dvisc	0.0003207	Paxs	571.97	Joback Method
dvisc	0.0001662	Paxs	649.69	Joback Method
dvisc	0.0000991	Paxs	727.40	Joback Method
dvisc	0.0000653	Paxs	805.12	Joback Method
dvisc	0.0000463	Paxs	882.84	Joback Method
dvisc	0.0000347	Paxs	960.56	Joback Method

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=C56282452&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
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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