Naphthalene, decahydro-2,6-dimethyl-

Other names: Decahydro-2,6-dimethylnaphthalene
2,6-Dimethyldecalin
2,6-dimethyldecahydro-naphthalene
Inchi: InChI=1S/C12H22/c1-9-3-5-12-8-10(2)4-6-11(12)7-9/h9-12H,3-8H2,1-2H3
InchiKey: XNOHNIPVHGINQP-UHFFFAOYSA-N
Formula: C12H22
SMILES: CC1CCC2CC(C)CCC2C1
Mol. weight [g/mol]: 166.30
CAS: 1618-22-0

Physical Properties

Property code	Value	Unit	Source
gf	107.84	kJ/mol	Joback Method
hf	-210.73	kJ/mol	Joback Method
hfus	16.85	kJ/mol	Joback Method
hvap	42.20	kJ/mol	Joback Method
log10ws	-3.67		Crippen Method
logp	3.859		Crippen Method
mcvol	158.220	ml/mol	McGowan Method
pc	2320.31	kPa	Joback Method
rinpol	1372.00		NIST Webbook
rinpol	1372.00		NIST Webbook
tb	481.00 ± 2.00	K	NIST Webbook
tc	710.00	K	Joback Method
tf	238.32	K	Joback Method
vc	0.588	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	382.66	J/mol×K	495.18	Joback Method
cpg	491.81	J/mol×K	674.20	Joback Method
cpg	472.51	J/mol×K	638.39	Joback Method
cpg	451.99	J/mol×K	602.59	Joback Method

cpg	430.21	J/mol×K	566.79	Joback Method
cpg	407.11	J/mol×K	530.98	Joback Method
cpg	509.92	J/mol×K	710.00	Joback Method
dvisc	0.0004257	Pa×s	495.18	Joback Method
dvisc	0.0004929	Pa×s	452.37	Joback Method
dvisc	0.0005885	Pa×s	409.56	Joback Method
dvisc	0.0007322	Pa×s	366.75	Joback Method
dvisc	0.0009653	Pa×s	323.94	Joback Method
dvisc	0.0013842	Pa×s	281.13	Joback Method
dvisc	0.0022593	Pa×s	238.32	Joback Method

Sources

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
NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C1618220&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
rinpol: Non-polar retention indices
tb: Normal Boiling Point Temperature
tc: Critical Temperature
tf: Normal melting (fusion) point
vc: Critical Volume

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