3,4,4a,9a-Tetrahydrofluorene

Other names: 1,4,4a,9a-tetrahydrofluorene
Inchi: InChI=1S/C13H14/c1-3-7-12-10(5-1)9-11-6-2-4-8-13(11)12/h1-3,5-7,11,13H,4,8-9H2
InchiKey: FQADUXRTNGLZSX-UHFFFAOYSA-N
Formula: C13H14
SMILES: C1=CC2Cc3ccccc3C2CC1
Mol. weight [g/mol]: 170.25
CAS: 52652-40-1

Physical Properties

Property code	Value	Unit	Source
gf	300.72	kJ/mol	Joback Method
hf	110.63	kJ/mol	Joback Method
hfus	18.47	kJ/mol	Joback Method
hvap	47.76	kJ/mol	Joback Method
log10ws	-3.70		Crippen Method
logp	3.292		Crippen Method
mcvol	144.250	ml/mol	McGowan Method
pc	2989.32	kPa	Joback Method
tb	545.41	K	Joback Method
tc	785.78	K	Joback Method
tf	308.33	K	Joback Method
vc	0.547	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	348.02	J/mol×K	545.41	Joback Method
cpg	367.14	J/mol×K	585.47	Joback Method
cpg	384.74	J/mol×K	625.53	Joback Method
cpg	400.96	J/mol×K	665.60	Joback Method
cpg	415.90	J/mol×K	705.66	Joback Method
cpg	429.69	J/mol×K	745.72	Joback Method
cpg	442.46	J/mol×K	785.78	Joback Method
dvisc	0.0016778	Pa×s	308.33	Joback Method

dvisc	0.0013438	Pa×s	347.84	Joback Method
dvisc	0.0011261	Pa×s	387.36	Joback Method
dvisc	0.0009751	Pa×s	426.87	Joback Method
dvisc	0.0008651	Pa×s	466.38	Joback Method
dvisc	0.0007821	Pa×s	505.90	Joback Method
dvisc	0.0007174	Pa×s	545.41	Joback Method

Sources

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=C52652401&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l

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