«alpha»-Isobutyldecalin

Inchi: InChI=1S/C14H26/c1-11(2)10-13-8-5-7-12-6-3-4-9-14(12)13/h11-14H,3-10H2,1-2H3
InchiKey: UGISRBVUOVJMIH-UHFFFAOYSA-N
Formula: C14H26
SMILES: CC(C)CC1CCCC2CCCCC21
Mol. weight [g/mol]: 194.36
CAS: 92369-83-0

Physical Properties

Property code	Value	Unit	Source
gf	129.95	kJ/mol	Joback Method
hf	-236.95	kJ/mol	Joback Method
hfus	17.43	kJ/mol	Joback Method
hvap	46.58	kJ/mol	Joback Method
log10ws	-4.51		Crippen Method
logp	4.639		Crippen Method
mcvol	186.400	ml/mol	McGowan Method
pc	2016.32	kPa	Joback Method
tb	545.17	K	Joback Method
tc	758.01	K	Joback Method
tf	250.10	K	Joback Method
vc	0.695	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	617.82	J/mol×K	758.01	Joback Method
cpg	599.28	J/mol×K	722.54	Joback Method
cpg	579.50	J/mol×K	687.06	Joback Method
cpg	558.41	J/mol×K	651.59	Joback Method
cpg	535.98	J/mol×K	616.12	Joback Method
cpg	512.13	J/mol×K	580.64	Joback Method
cpg	486.82	J/mol×K	545.17	Joback Method
cpl	358.60	J/mol×K	313.00	NIST Webbook
dvisc	0.0004465	Pa×s	495.99	Joback Method

dvisc	0.0005880	Pa×s	446.81	Joback Method
dvisc	0.0008290	Pa×s	397.63	Joback Method
dvisc	0.0012876	Pa×s	348.46	Joback Method
dvisc	0.0023113	Pa×s	299.28	Joback Method
dvisc	0.0052223	Pa×s	250.10	Joback Method
dvisc	0.0003563	Pa×s	545.17	Joback Method

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C92369830&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
cpl:	Liquid phase 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