

«alpha»-sec-Butyldecalin

Inchi:	InChI=1S/C14H26/c1-3-11(2)13-10-6-8-12-7-4-5-9-14(12)13/h11-14H,3-10H2,1-2H3
InchiKey:	KFRUPTVLKRBRTH-UHFFFAOYSA-N
Formula:	C14H26
SMILES:	CCC(C)C1CCCC2CCCCC21
Mol. weight [g/mol]:	194.36
CAS:	92369-82-9

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	486.82	J/molxK	545.17	Joback Method
cpg	512.13	J/molxK	580.64	Joback Method
cpg	535.98	J/molxK	616.12	Joback Method
cpg	558.41	J/molxK	651.59	Joback Method
cpg	579.50	J/molxK	687.06	Joback Method
cpg	599.28	J/molxK	722.54	Joback Method
cpg	617.82	J/molxK	758.01	Joback Method
cpl	352.30	J/molxK	313.00	NIST Webbook
cpl	350.60	J/molxK	311.00	NIST Webbook

dvisc	0.0052223	Paxs	250.10	Joback Method
dvisc	0.0023113	Paxs	299.28	Joback Method
dvisc	0.0012876	Paxs	348.46	Joback Method
dvisc	0.0008290	Paxs	397.63	Joback Method
dvisc	0.0005880	Paxs	446.81	Joback Method
dvisc	0.0004465	Paxs	495.99	Joback Method
dvisc	0.0003563	Paxs	545.17	Joback Method

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C92369829&Units=SI
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

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

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