«alpha»-Isopropyldecalin

Inchi: InChI=1S/C13H24/c1-10(2)12-9-5-7-11-6-3-4-8-13(11)12/h10-13H,3-9H2,1-2H3
InchiKey: VIJJVIFWVZYBLO-UHFFFAOYSA-N
Formula: C13H24
SMILES: CC(C)C1CCCC2CCCCC21
Mol. weight [g/mol]: 180.33
CAS: 1010-74-8

Physical Properties

Property code	Value	Unit	Source
gf	121.53	kJ/mol	Joback Method
hf	-216.31	kJ/mol	Joback Method
hfus	14.84	kJ/mol	Joback Method
hvap	44.35	kJ/mol	Joback Method
log10ws	-4.09		Crippen Method
logp	4.249		Crippen Method
mcvol	172.310	ml/mol	McGowan Method
pc	2202.08	kPa	Joback Method
tb	522.29	K	Joback Method
tc	738.69	K	Joback Method
tf	238.83	K	Joback Method
vc	0.638	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	434.13	J/mol×K	522.29	Joback Method
cpg	459.16	J/mol×K	558.36	Joback Method
cpg	482.73	J/mol×K	594.42	Joback Method
cpg	504.89	J/mol×K	630.49	Joback Method
cpg	525.70	J/mol×K	666.56	Joback Method
cpg	545.22	J/mol×K	702.63	Joback Method
cpg	563.49	J/mol×K	738.69	Joback Method
cpl	318.40	J/mol×K	313.00	NIST Webbook
cpl	316.30	J/mol×K	311.00	NIST Webbook

dvisc	0.0050372	Pa×s	238.83	Joback Method
dvisc	0.0022799	Pa×s	286.07	Joback Method
dvisc	0.0012919	Pa×s	333.32	Joback Method
dvisc	0.0008429	Pa×s	380.56	Joback Method
dvisc	0.0006044	Pa×s	427.80	Joback Method
dvisc	0.0004630	Pa×s	475.05	Joback Method
dvisc	0.0003722	Pa×s	522.29	Joback Method

Sources

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=C1010748&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws

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