

«alpha»-Ethyldecalin

Inchi:	InChI=1S/C12H22/c1-2-10-7-5-8-11-6-3-4-9-12(10)11/h10-12H,2-9H2,1H3
InchiKey:	HUMCBDCARGDFNV-UHFFFAOYSA-N
Formula:	C12H22
SMILES:	CCC1CCCC2CCCCC12
Mol. weight [g/mol]:	166.30
CAS:	1008-17-9

Physical Properties

Property code	Value	Unit	Source
chl	-7493.30	kJ/mol	NIST Webbook
gf	115.55	kJ/mol	Joback Method
hf	-190.39	kJ/mol	Joback Method
hfus	15.78	kJ/mol	Joback Method
hvap	42.51	kJ/mol	Joback Method
log10ws	-3.91		Crippen Method
logp	4.003		Crippen Method
mcvol	158.220	ml/mol	McGowan Method
pc	2395.87	kPa	Joback Method
tb	495.00 ± 5.00	K	NIST Webbook
tc	714.86	K	Joback Method
tf	242.56	K	Joback Method
vc	0.589	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	382.91	J/mol×K	499.85	Joback Method
cpg	406.90	J/mol×K	535.69	Joback Method
cpg	429.53	J/mol×K	571.52	Joback Method
cpg	450.82	J/mol×K	607.36	Joback Method
cpg	470.85	J/mol×K	643.19	Joback Method
cpg	489.65	J/mol×K	679.03	Joback Method
cpg	507.27	J/mol×K	714.86	Joback Method
cpl	305.40	J/mol×K	313.00	NIST Webbook

cpl	303.30	J/mol×K	311.00	NIST Webbook
dvisc	0.0034936	Paxs	242.56	Joback Method
dvisc	0.0018638	Paxs	285.44	Joback Method
dvisc	0.0011717	Paxs	328.32	Joback Method
dvisc	0.0008200	Paxs	371.20	Joback Method
dvisc	0.0006179	Paxs	414.09	Joback Method
dvisc	0.0004910	Paxs	456.97	Joback Method
dvisc	0.0004058	Paxs	499.85	Joback Method

Sources

McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C1008179&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

Legend

chl:	Standard liquid enthalpy of combustion
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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