2«alpha», 4a«beta», 8a«alpha»-Decahydro-2-naphthalenol

Other names: 2«beta»-hydroxy-trans-decalin
Inchi: InChI=1S/C10H18O/c11-10-6-5-8-3-1-2-4-9(8)7-10/h8-11H,1-7H2
InchiKey: UPMAOXLCTXPPAG-UHFFFAOYSA-N
Formula: C10H18O
SMILES: OC1CCC2CCCCC2C1
Mol. weight [g/mol]: 154.25
CAS: 5779-35-1

Physical Properties

Property code	Value	Unit	Source
gf	-38.11	kJ/mol	Joback Method
hf	-301.34	kJ/mol	Joback Method
hfus	14.68	kJ/mol	Joback Method
hvap	54.74	kJ/mol	Joback Method
log10ws	-2.69		Crippen Method
logp	2.338		Crippen Method
mcvol	135.910	ml/mol	McGowan Method
pc	3231.98	kPa	Joback Method
rinpol	1284.00		NIST Webbook
rinpol	1284.00		NIST Webbook
ripol	1943.00		NIST Webbook
ripol	1943.00		NIST Webbook
tb	546.27	K	Joback Method
tc	752.73	K	Joback Method
tf	280.84	K	Joback Method
vc	0.495	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	356.72	J/mol×K	546.27	Joback Method
cpg	439.21	J/mol×K	718.32	Joback Method
cpg	424.71	J/mol×K	683.91	Joback Method
cpg	409.25	J/mol×K	649.50	Joback Method

cpg	392.80	J/mol×K	615.09	Joback Method
cpg	375.30	J/mol×K	580.68	Joback Method
cpg	452.80	J/mol×K	752.73	Joback Method
dvisc	0.0002264	Pa×s	546.27	Joback Method
dvisc	0.0003414	Pa×s	502.03	Joback Method
dvisc	0.0005572	Pa×s	457.79	Joback Method
dvisc	0.0010101	Pa×s	413.56	Joback Method
dvisc	0.0021116	Pa×s	369.32	Joback Method
dvisc	0.0053952	Pa×s	325.08	Joback Method
dvisc	0.0185243	Pa×s	280.84	Joback Method

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C5779351&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
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
rinpol:	Non-polar retention indices
ripol:	Polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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