trans-5,6-Epoxydecane

Other names:	2,3-Dibutyloxirane, trans-
	Decane, 5,6-epoxy, trans
Inchi:	InChI=1S/C10H20O/c1-3-5-7-9-10(11-9)8-6-4-2/h9-10H,3-8H2,1-2H3/t9-,10-/m1/s1
InchiKey:	WQURFPNPTFZWGE-NXEZZACHSA-N
Formula:	C10H20O
SMILES:	CCCCC1OC1CCCC
Mol. weight [g/mol]:	156.27
CAS:	2165-61-9

Physical Properties

Property code	Value	Unit	Source
gf	0.24	kJ/mol	Joback Method
hf	-329.27	kJ/mol	Joback Method
hfus	28.84	kJ/mol	Joback Method
hvap	41.97	kJ/mol	Joback Method
log10ws	-3.21		Crippen Method
logp	3.134		Crippen Method
mcvol	146.770	ml/mol	McGowan Method
pc	2289.32	kPa	Joback Method
rinpol	1138.00		NIST Webbook
rinpol	1138.00		NIST Webbook
tb	457.22	K	Joback Method
tc	632.62	K	Joback Method
tf	242.73	K	Joback Method
vc	0.573	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	334.41	J/mol×K	457.22	Joback Method
cpg	350.66	J/mol×K	486.45	Joback Method
cpg	366.18	J/mol×K	515.69	Joback Method
cpg	381.00	J/mol×K	544.92	Joback Method
cpg	395.15	J/mol×K	574.15	Joback Method

cpg	408.66	J/mol×K	603.39	Joback Method
cpg	421.55	J/mol×K	632.62	Joback Method
dvisc	0.0018618	Pa×s	242.73	Joback Method
dvisc	0.0012754	Pa×s	278.48	Joback Method
dvisc	0.0009522	Pa×s	314.23	Joback Method
dvisc	0.0007546	Pa×s	349.98	Joback Method
dvisc	0.0006244	Pa×s	385.72	Joback Method
dvisc	0.0005335	Pa×s	421.47	Joback Method
dvisc	0.0004672	Pa×s	457.22	Joback Method

Sources

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
NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C2165619&Units=SI
Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l

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
tb: Normal Boiling Point Temperature
tc: Critical Temperature
tf: Normal melting (fusion) point
vc: Critical Volume