Oxirane, 2-ethyl-3-methyl-, trans-

Other names: 2-Ethyl-3-methyl-oxirane (E)
Inchi: InChI=1S/C5H10O/c1-3-5-4(2)6-5/h4-5H,3H2,1-2H3/t4-,5-/m0/s1
InchiKey: BCJPEZMFAKOJPM-WHFBIAKZSA-N
Formula: C5H10O
SMILES: CCC1OC1C
Mol. weight [g/mol]: 86.13
CAS: 3203-98-3

Physical Properties

Property code	Value	Unit	Source
gf	-41.86	kJ/mol	Joback Method
hf	-226.07	kJ/mol	Joback Method
hfus	15.89	kJ/mol	Joback Method
hvap	30.84	kJ/mol	Joback Method
log10ws	-1.12		Crippen Method
logp	1.184		Crippen Method
mcvol	76.320	ml/mol	McGowan Method
pc	3857.88	kPa	Joback Method
rinpol	652.00		NIST Webbook
rinpol	654.90		NIST Webbook
rinpol	655.00		NIST Webbook
rinpol	655.00		NIST Webbook
rinpol	655.00		NIST Webbook
rinpol	655.00		NIST Webbook
rinpol	655.10		NIST Webbook
tb	342.82	K	Joback Method
tc	522.72	K	Joback Method
tf	186.38	K	Joback Method
vc	0.292	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	134.69	J/mol×K	342.82	Joback Method

cpg	145.40	J/mol×K	372.80	Joback Method
cpg	155.61	J/mol×K	402.79	Joback Method
cpg	165.35	J/mol×K	432.77	Joback Method
cpg	174.63	J/mol×K	462.75	Joback Method
cpg	183.47	J/mol×K	492.73	Joback Method
cpg	191.88	J/mol×K	522.72	Joback Method
dvisc	0.0005411	Pa×s	186.38	Joback Method
dvisc	0.0004606	Pa×s	212.45	Joback Method
dvisc	0.0004062	Pa×s	238.53	Joback Method
dvisc	0.0003671	Pa×s	264.60	Joback Method
dvisc	0.0003379	Pa×s	290.67	Joback Method
dvisc	0.0003153	Pa×s	316.75	Joback Method
dvisc	0.0002973	Pa×s	342.82	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=C3203983&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