Oxirane, propyl-

Other names:	Pentane, 1,2-epoxy-
	Pentene 1,2-oxide
	Propylethylene oxide
	Propyloxirane
	1-Pentene oxide
	1,2-Epoxypentane
	2-Propyl-oxirane
Inchi:	InChI=1S/C5H10O/c1-2-3-5-4-6-5/h5H,2-4H2,1H3
InchiKey:	SYURNNNQIFDVCA-UHFFFAOYSA-N
Formula:	C5H10O
SMILES:	CCCC1CO1
Mol. weight [g/mol]:	86.13
CAS:	1003-14-1

Physical Properties

Property code	Value	Unit	Source
gf	-34.15	kJ/mol	Joback Method
hf	-205.73	kJ/mol	Joback Method
hfus	14.82	kJ/mol	Joback Method
hvap	31.15	kJ/mol	Joback Method
log10ws	-1.01		Crippen Method
logp	1.185		Crippen Method
mcvol	76.320	ml/mol	McGowan Method
pc	4021.02	kPa	Joback Method
rinpol	624.90		NIST Webbook
rinpol	666.00		NIST Webbook
rinpol	624.00		NIST Webbook
rinpol	666.00		NIST Webbook
rinpol	624.90		NIST Webbook
rinpol	624.70		NIST Webbook
rinpol	624.50		NIST Webbook
rinpol	625.00		NIST Webbook
rinpol	625.00		NIST Webbook
rinpol	624.00		NIST Webbook
tb	364.85 ± 0.50	K	NIST Webbook
tc	528.16	K	Joback Method
tf	190.62	K	Joback Method

vc	0.293	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	134.15	J/mol×K	347.49	Joback Method
cpg	181.98	J/mol×K	498.05	Joback Method
cpg	173.40	J/mol×K	467.94	Joback Method
cpg	164.35	J/mol×K	437.83	Joback Method
cpg	154.81	J/mol×K	407.71	Joback Method
cpg	144.75	J/mol×K	377.60	Joback Method
cpg	190.11	J/mol×K	528.16	Joback Method
dvisc	0.0003539	Pa×s	347.49	Joback Method
dvisc	0.0003972	Pa×s	321.35	Joback Method
dvisc	0.0004549	Pa×s	295.20	Joback Method
dvisc	0.0005349	Pa×s	269.06	Joback Method
dvisc	0.0006513	Pa×s	242.91	Joback Method
dvisc	0.0008316	Pa×s	216.77	Joback Method
dvisc	0.0011356	Pa×s	190.62	Joback Method

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C1003141&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
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume