Oxirane, tetramethyl-

Other names:	Tetramethylethylene oxide
	Butane, 2,3-epoxy-2,3-dimethyl-
	Tetramethyloxirane
	2,3-Dimethyl-2-butene oxide
	2,3-Dimethyl-2,3-epoxybutane
	2,3-Epoxy-2,3-dimethylbutane
	2,2,3,3-Tetramethyl-oxirane
Inchi:	InChI=1S/C6H12O/c1-5(2)6(3,4)7-5/h1-4H3
InchiKey:	SYQIWVMFOAHDMK-UHFFFAOYSA-N
Formula:	C6H12O
SMILES:	CC1(C)OC1(C)C
Mol. weight [g/mol]:	100.16
CAS:	5076-20-0

Physical Properties

Property code	Value	Unit	Source
gf	-44.42	kJ/mol	Joback Method
hf	-216.23	kJ/mol	Joback Method
hfus	5.88	kJ/mol	Joback Method
hvap	30.76	kJ/mol	Joback Method
log10ws	-1.54		Crippen Method
logp	1.574		Crippen Method
mcvol	90.410	ml/mol	McGowan Method
pc	3829.28	kPa	Joback Method
rinpol	681.40		NIST Webbook
rinpol	682.20		NIST Webbook
rinpol	686.00		NIST Webbook
rinpol	686.00		NIST Webbook
rinpol	681.40		NIST Webbook
rinpol	681.60		NIST Webbook
rinpol	681.90		NIST Webbook
tb	366.18	K	Joback Method
tc	562.99	K	Joback Method
tf	245.45	K	Joback Method
vc	0.344	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	170.49	J/mol×K	366.18	Joback Method
cpg	184.68	J/mol×K	398.98	Joback Method
cpg	197.46	J/mol×K	431.78	Joback Method
cpg	208.97	J/mol×K	464.58	Joback Method
cpg	219.37	J/mol×K	497.38	Joback Method
cpg	228.81	J/mol×K	530.19	Joback Method
cpg	237.44	J/mol×K	562.99	Joback Method

Sources

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=C5076200&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws

Legend

cpg:	Ideal gas heat capacity
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