Butane, 1,2:3,4-diepoxy-, (.+/-.)-

Other names:	2,2'-Bioxirane, (R*,R*)-(.+/-.)- (.+/-.)-1,2:3,4-Diepoxybutane Butane, 1,2:3,4-diepoxy-, DL- DL-Diepoxybutane Butadiene diepoxide, dl- Butane, (.+/-.)-1,2:3,4-diepoxy- (R*,R*)-(.+/-.)-2,2'-Bioxirane dl-Butadiene dioxide 1,2:3,4-Dianhydro-dl-threitol dl-1,2:3,4-Diepoxybutane 1,2:3,4-Diepoxybutane, dl- 2,2'-Bioxirane, (2R,2'R)-rel- 1,2,3,4-diepoxybutane
Inchi:	InChI=1S/C4H6O2/c1-3(5-1)4-2-6-4/h3-4H,1-2H2/t3-,4-/m0/s1
InchiKey:	ZFIVKAOQEXOYFY-IMJSIDKUSA-N
Formula:	C4H6O2
SMILES:	C1OC1C1CO1
Mol. weight [g/mol]:	86.09
CAS:	298-18-0

Physical Properties

Property code	Value	Unit	Source
gf	-67.94	kJ/mol	Joback Method
hf	-244.29	kJ/mol	Joback Method
hfus	18.34	kJ/mol	Joback Method
hvap	33.34	kJ/mol	Joback Method
log10ws	0.32		Crippen Method
logp	-0.216		Crippen Method
mcvol	57.240	ml/mol	McGowan Method
pc	5406.57	kPa	Joback Method
tb	417.60	K	NIST Webbook
tb	417.20	K	NIST Webbook
tc	558.39	K	Joback Method
tf	260.40 ± 0.60	K	NIST Webbook
tf	277.00	K	NIST Webbook
vc	0.215	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	109.07	J/mol×K	358.30	Joback Method
cpg	119.63	J/mol×K	391.65	Joback Method
cpg	129.41	J/mol×K	425.00	Joback Method
cpg	138.46	J/mol×K	458.35	Joback Method
cpg	146.83	J/mol×K	491.69	Joback Method
cpg	154.56	J/mol×K	525.04	Joback Method
cpg	161.70	J/mol×K	558.39	Joback Method
dvisc	0.0007038	Pa×s	223.86	Joback Method
dvisc	0.0006732	Pa×s	246.27	Joback Method
dvisc	0.0006488	Pa×s	268.67	Joback Method
dvisc	0.0006288	Pa×s	291.08	Joback Method
dvisc	0.0006122	Pa×s	313.49	Joback Method
dvisc	0.0005981	Pa×s	335.89	Joback Method
dvisc	0.0005861	Pa×s	358.30	Joback Method

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	330.20	K	3.30	NIST Webbook
tbrp	317.60	K	1.80	NIST Webbook

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C298180&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
tb:	Normal Boiling Point Temperature
tbrp:	Boiling point at reduced pressure
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume