

Oxiranyl radical

Inchi:	InChI=1S/C2H3O/c1-2-3-1/h1H,2H2
InchiKey:	CPRNZALWAHPTRF-UHFFFAOYSA-N
Formula:	C2H3O
SMILES:	[CH]1CO1
Mol. weight [g/mol]:	43.04
CAS:	31586-84-2

Physical Properties

Property code	Value	Unit	Source
gf	-7.03	kJ/mol	Joback Method
hf	-88.00	kJ/mol	Joback Method
hfpi	841.00	kJ/mol	NIST Webbook
hfus	8.73	kJ/mol	Joback Method
hvap	24.32	kJ/mol	Joback Method
log10ws	0.25		Crippen Method
logp	0.178		Crippen Method
mcvol	31.900	ml/mol	McGowan Method
pc	6451.51	kPa	Joback Method
tb	278.15	K	Joback Method
tc	453.12	K	Joback Method
tf	173.18	K	Joback Method
vc	0.117	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	37.44	J/molxK	278.15	Joback Method
cpg	43.48	J/molxK	307.31	Joback Method
cpg	49.01	J/molxK	336.47	Joback Method
cpg	54.06	J/molxK	365.63	Joback Method
cpg	58.65	J/molxK	394.80	Joback Method
cpg	62.82	J/molxK	423.96	Joback Method
cpg	66.60	J/molxK	453.12	Joback Method
dvisc	0.0000869	Paxs	173.18	Joback Method

dvisc	0.0000989	Paxs	190.68	Joback Method
dvisc	0.0001102	Paxs	208.17	Joback Method
dvisc	0.0001207	Paxs	225.66	Joback Method
dvisc	0.0001304	Paxs	243.16	Joback Method
dvisc	0.0001395	Paxs	260.65	Joback Method
dvisc	0.0001480	Paxs	278.15	Joback Method

Sources

Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci9903071
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=C31586842&Units=SI

Legend

cpg:	Ideal gas heat capacity
dvisc:	Dynamic viscosity
gf:	Standard Gibbs free energy of formation
hf:	Enthalpy of formation at standard conditions
hfpi:	Enthalpy of formation of positive ion 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
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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