

Methyleneoxirane

Other names:	cyc-(H ₂ COC)=CH ₂
Inchi:	InChI=1S/C3H4O/c1-3-2-4-3/h1-2H2
InchiKey:	AAEZMHSWRQVQEK-UHFFFAOYSA-N
Formula:	C ₃ H ₄ O
SMILES:	C=C1CO1
Mol. weight [g/mol]:	56.06
CAS:	40079-14-9

Physical Properties

Property code	Value	Unit	Source
gf	9.80	kJ/mol	Joback Method
hf	-59.87	kJ/mol	Joback Method
hfus	7.41	kJ/mol	Joback Method
hvap	27.16	kJ/mol	Joback Method
log10ws	-0.41		Crippen Method
logp	0.530		Crippen Method
mcvol	43.840	ml/mol	McGowan Method
pc	5627.81	kPa	Joback Method
tb	305.56	K	Joback Method
tc	488.31	K	Joback Method
tf	186.00	K	Joback Method
vc	0.167	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	63.66	J/molxK	305.56	Joback Method
cpg	88.12	J/molxK	457.85	Joback Method
cpg	83.87	J/molxK	427.39	Joback Method
cpg	79.31	J/molxK	396.94	Joback Method
cpg	74.44	J/molxK	366.48	Joback Method
cpg	69.23	J/molxK	336.02	Joback Method
cpg	92.09	J/molxK	488.31	Joback Method
dvisc	0.0002620	Paxs	305.56	Joback Method

dvisc	0.0002871	Paxs	285.63	Joback Method
dvisc	0.0003188	Paxs	265.71	Joback Method
dvisc	0.0003601	Paxs	245.78	Joback Method
dvisc	0.0004156	Paxs	225.85	Joback Method
dvisc	0.0004931	Paxs	205.93	Joback Method
dvisc	0.0006069	Paxs	186.00	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=C40079149&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci9903071

Legend

cp_g:	Ideal gas heat capacity
dvisc:	Dynamic viscosity
g_f:	Standard Gibbs free energy of formation
h_f:	Enthalpy of formation at standard conditions
h_{fus}:	Enthalpy of fusion at standard conditions
h_{vap}:	Enthalpy of vaporization at standard conditions
log₁₀w_s:	Log ₁₀ of Water solubility in mol/l
log_p:	Octanol/Water partition coefficient
mc_{vol}:	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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