Tetraethoxymethane

Other names:	Ethane, 1,1',1'',1'''-[methanetetrayltetrakis(oxy)]tetrakis-
	Orthocarbonic acid, tetraethyl ester
	Tetraethyl orthocarbonate
Inchi:	InChI=1S/C9H20O4/c1-5-10-9(11-6-2,12-7-3)13-8-4/h5-8H2,1-4H3
InchiKey:	CWLNAJYDRSIKJS-UHFFFAOYSA-N
Formula:	C9H20O4
SMILES:	CCOC(OCC)(OCC)OCC
Mol. weight [g/mol]:	192.25
CAS:	78-09-1

Physical Properties

Property code	Value	Unit	Source
chl	-5486.30 ± 1.70	kJ/mol	NIST Webbook
chl	-5481.00 ± 2.00	kJ/mol	NIST Webbook
gf	-392.26	kJ/mol	Joback Method
hf	-861.70 ± 2.10	kJ/mol	NIST Webbook
hf	-866.10	kJ/mol	NIST Webbook
hfl	-919.00 ± 1.00	kJ/mol	NIST Webbook
hfl	-914.60 ± 2.10	kJ/mol	NIST Webbook
hfus	16.40	kJ/mol	Joback Method
hvap	41.00 ± 3.00	kJ/mol	NIST Webbook
hvap	52.90 ± 0.20	kJ/mol	NIST Webbook
hvap	52.85 ± 0.15	kJ/mol	NIST Webbook
hvap	52.90	kJ/mol	NIST Webbook
log10ws	-1.54		Crippen Method
logp	1.744		Crippen Method
mcvol	161.150	ml/mol	McGowan Method
pc	2202.08	kPa	Joback Method
tb	432.70	K	NIST Webbook
tc	664.29	K	Joback Method
tf	282.53	K	Joback Method
vc	0.601	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	379.22	J/mol×K	491.77	Joback Method
cpg	445.98	J/mol×K	635.53	Joback Method
cpg	433.56	J/mol×K	606.78	Joback Method
cpg	420.67	J/mol×K	578.03	Joback Method
cpg	407.31	J/mol×K	549.28	Joback Method
cpg	393.49	J/mol×K	520.52	Joback Method
cpg	457.91	J/mol×K	664.29	Joback Method
dvisc	0.0001215	Pa×s	491.77	Joback Method
dvisc	0.0001629	Pa×s	456.90	Joback Method
dvisc	0.0002291	Pa×s	422.02	Joback Method
dvisc	0.0003427	Pa×s	387.15	Joback Method
dvisc	0.0005552	Pa×s	352.28	Joback Method
dvisc	0.0010000	Pa×s	317.40	Joback Method
dvisc	0.0020828	Pa×s	282.53	Joback Method

Sources

McGowan Method: http://link.springer.com/article/10.1007/BF02311772
NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C78091&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

Legend

chl: Standard liquid enthalpy of combustion
cpg: Ideal gas heat capacity
dvisc: Dynamic viscosity
gf: Standard Gibbs free energy of formation
hf: Enthalpy of formation at standard conditions
hfl: Liquid phase 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
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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