Ethyl orthoformate

Other names:	Ethane, 1,1',1''-[methylidynetris(oxy)]tris-
	Orthoformic acid, triethyl ester
	Aethon
	Ethone
	Orthoformic acid ethyl ester
	Triethoxymethane
	Triethyl orthoformate
	Triethoxmethane
	Ethyl formate(ortho)
	Ethylester kyseliny orthomravenci
	Methane, triethoxy-
	Orthomravencan ethylnaty
	1,1',1''-(Methylidynetris(oxy))tris(ethane)
	Triethylester kyseliny orthomravenci
	UN 2524
	Triethyl ester of orthoformic acid
	NSC 5289
Inchi:	InChI=1S/C7H16O3/c1-4-8-7(9-5-2)10-6-3/h7H,4-6H2,1-3H3
InchiKey:	GKASDNZWUGIAMG-UHFFFAOYSA-N
Formula:	C7H16O3
SMILES:	CCOC(OCC)OCC
Mol. weight [g/mol]:	148.20
CAS:	122-51-0

Physical Properties

Property code	Value	Unit	Source
chl	-4365.50 ± 0.80	kJ/mol	NIST Webbook
chl	-4359.90 ± 2.90	kJ/mol	NIST Webbook
gf	-309.38	kJ/mol	Joback Method
hf	-635.30 ± 3.80	kJ/mol	NIST Webbook
hf	-641.80	kJ/mol	NIST Webbook
hf	-630.60	kJ/mol	NIST Webbook
hfl	-675.80 ± 0.80	kJ/mol	NIST Webbook
hfl	-687.00	kJ/mol	NIST Webbook
hfl	-681.30 ± 2.90	kJ/mol	NIST Webbook
hfus	13.93	kJ/mol	Joback Method
hvap	38.02	kJ/mol	Joback Method

log10ws	-1.12		Crippen Method
logp	1.380		Crippen Method
mcvol	127.100	ml/mol	McGowan Method
pc	2676.31	kPa	Joback Method
rinpol	884.70		NIST Webbook
rinpol	884.70		NIST Webbook
ripol	1274.00		NIST Webbook
tb	419.00 ± 2.00	K	NIST Webbook
tb	419.20	K	NIST Webbook
tb	418.00 ± 1.00	K	NIST Webbook
tb	418.90 ± 0.30	K	NIST Webbook
tb	418.00 ± 2.50	K	NIST Webbook
tc	595.08	K	Joback Method
tf	197.10 ± 0.40	K	NIST Webbook
vc	0.475	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	320.76	J/mol×K	566.96	Joback Method
cpg	330.86	J/mol×K	595.08	Joback Method
cpg	266.07	J/mol×K	426.38	Joback Method
cpg	277.52	J/mol×K	454.50	Joback Method
cpg	288.72	J/mol×K	482.61	Joback Method
cpg	299.67	J/mol×K	510.73	Joback Method
cpg	310.35	J/mol×K	538.85	Joback Method
dvisc	0.0001655	Pa×s	426.38	Joback Method
dvisc	0.0002194	Pa×s	392.04	Joback Method
dvisc	0.0033654	Pa×s	220.34	Joback Method
dvisc	0.0014520	Pa×s	254.68	Joback Method
dvisc	0.0007650	Pa×s	289.02	Joback Method
dvisc	0.0004618	Pa×s	323.36	Joback Method
dvisc	0.0003071	Pa×s	357.70	Joback Method
hvapt	47.20	kJ/mol	348.50	NIST Webbook
hvapt	49.00	kJ/mol	308.00	NIST Webbook

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=C122510&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws

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
hvapt:	Enthalpy of vaporization at a given temperature
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
ripol:	Polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume