Trimethyl orthformate

Other names:	Orthoformic acid, trimethyl ester
	Methyl orthoformate
	Orthoformic acid methyl ester
	Trimethoxymethane
	Trimethyl orthoformate
	CH(OCH3)3
	Methylester kyseliny orthomravenci
	Orthomravencan methylnaty
	Trimethylester kyseliny orthomravenci
	Methoxymethylal
	NSC 147479
Inchi:	InChI=1S/C4H10O3/c1-5-4(6-2)7-3/h4H,1-3H3
InchiKey:	PYOKUURKVVELLB-UHFFFAOYSA-N
Formula:	C4H10O3
SMILES:	COC(OC)OC
Mol. weight [g/mol]:	106.12

Physical Properties

Property code	Value	Unit	Source
af	0.3404		Cheméo Relay (1.0)
chl	-2427.80 ± 2.00	kJ/mol	NIST Webbook
gf	-334.64	kJ/mol	Joback Method
hf	-531.90 ± 2.60	kJ/mol	NIST Webbook
hf	-531.80 ± 3.20	kJ/mol	NIST Webbook
hfl	-575.30 ± 2.00	kJ/mol	NIST Webbook
hfl	-568.86 ± 0.88	kJ/mol	NIST Webbook
hfus	6.16	kJ/mol	Joback Method
hvap	38.10 ± 0.80	kJ/mol	NIST Webbook
hvap	43.40	kJ/mol	NIST Webbook
hvap	38.20	kJ/mol	NIST Webbook
hvap	37.10	kJ/mol	NIST Webbook
hvap	38.10 ± 0.84	kJ/mol	NIST Webbook
ie	10.24 ± 0.07	eV	NIST Webbook
ie	9.50	eV	NIST Webbook
ie	9.50	eV	NIST Webbook
ie	9.50	eV	NIST Webbook
log10ws	0.28		Cheméo Relay (1.0)

logp	0.209		Crippen Method
mcvol	84.830	ml/mol	McGowan Method
pc	3695.46	kPa	Joback Method
rinpol	654.00		NIST Webbook
rinpol	702.00		NIST Webbook
rinpol	660.00		NIST Webbook
rinpol	654.00		NIST Webbook
tb	374.70	K	NIST Webbook
tb	377.20	K	NIST Webbook
tc	524.33	K	Cheméo Relay (1.0)

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	192.02	J/mol×K	499.73	Joback Method
cpg	198.78	J/mol×K	528.12	Joback Method
cpg	164.24	J/mol×K	386.14	Joback Method
cpg	171.26	J/mol×K	414.53	Joback Method
cpg	178.24	J/mol×K	442.93	Joback Method
cpg	185.17	J/mol×K	471.33	Joback Method
cpg	157.20	J/mol×K	357.74	Joback Method
dvisc	0.0007571	Pa×s	243.60	Joback Method
dvisc	0.0013716	Pa×s	215.06	Joback Method
dvisc	0.0029807	Pa×s	186.53	Joback Method
dvisc	0.0004733	Pa×s	272.13	Joback Method
dvisc	0.0003235	Pa×s	300.67	Joback Method
dvisc	0.0002362	Pa×s	329.21	Joback Method
dvisc	0.0001813	Pa×s	357.74	Joback Method
hvapt	39.00	kJ/mol	315.50	NIST Webbook

Sources

Crippen Method: https://www.chemeo.com/doc/models/crippen_log10ws

Cheméo Relay (1.0):

Cheméo Relay (1.0, beta):

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C149735&Units=SI

Joback Method: https://en.wikipedia.org/wiki/Joback_method

McGowan Method: http://link.springer.com/article/10.1007/BF02311772

Legend

af:	Acentric Factor
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
ie:	Ionization energy
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
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature