Triethyl methanetricarboxylate

Other names:	Diethyl 2-(ethoxycarbonyl)malonate
	Tricarbethoxymethane
	Methanetricarboxylic acid, triethyl ester
Inchi:	InChI=1S/C10H16O6/c1-4-14-8(11)7(9(12)15-5-2)10(13)16-6-3/h7H,4-6H2,1-3H3
InchiKey:	AGZPNUZBDCYTBB-UHFFFAOYSA-N
Formula:	C10H16O6
SMILES:	CCOC(=O)C(C(=O)OCC)C(=O)OCC
Mol. weight [g/mol]:	232.23
CAS:	6279-86-3

Physical Properties

Property code	Value	Unit	Source
chl	-4969.46 ± 0.67	kJ/mol	NIST Webbook
gf	-670.88	kJ/mol	Joback Method
hf	-1173.10 ± 1.30	kJ/mol	NIST Webbook
hfl	-1252.30 ± 1.00	kJ/mol	NIST Webbook
hfus	26.49	kJ/mol	Joback Method
hvap	79.20	kJ/mol	NIST Webbook
hvap	79.10 ± 0.70	kJ/mol	NIST Webbook
hvap	79.20 ± 0.71	kJ/mol	NIST Webbook
log10ws	-0.35		Crippen Method
logp	0.292		Crippen Method
mcvol	174.080	ml/mol	McGowan Method
pc	2421.88	kPa	Joback Method
tb	526.20	K	NIST Webbook
tc	846.48	K	Joback Method
tf	403.94	K	Joback Method
vc	0.661	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	459.50	J/mol×K	656.63	Joback Method
cpg	524.20	J/mol×K	846.48	Joback Method

cpg	515.07	J/mol×K	814.84	Joback Method
cpg	505.25	J/mol×K	783.20	Joback Method
cpg	494.77	J/mol×K	751.55	Joback Method
cpg	483.64	J/mol×K	719.91	Joback Method
cpg	471.88	J/mol×K	688.27	Joback Method
cpl	419.80	J/mol×K	298.15	NIST Webbook
dvisc	0.0007766	Pa×s	446.06	Joback Method
dvisc	0.0001388	Pa×s	656.63	Joback Method
dvisc	0.0001782	Pa×s	614.51	Joback Method
dvisc	0.0002374	Pa×s	572.40	Joback Method
dvisc	0.0003310	Pa×s	530.28	Joback Method
dvisc	0.0004887	Pa×s	488.17	Joback Method
dvisc	0.0013591	Pa×s	403.94	Joback Method
hvapt	74.10 ± 0.40	kJ/mol	318.00	NIST Webbook

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C6279863&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
McGowan Method: http://link.springer.com/article/10.1007/BF02311772

Legend

chl: Standard liquid enthalpy of combustion
cpg: Ideal gas heat capacity
cpl: Liquid phase 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
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume