Propanedioic acid, ethylmethyl-, diethyl ester

Other names: diethyl ethylmethylmalonate
Inchi: InChI=1S/C10H18O4/c1-5-10(4,8(11)13-6-2)9(12)14-7-3/h5-7H2,1-4H3
InchiKey: ODRGILDUWDVBJX-UHFFFAOYSA-N
Formula: C10H18O4
SMILES: CCOC(=O)C(C)(CC)C(=O)OCC
Mol. weight [g/mol]: 202.25
CAS: 2049-70-9

Physical Properties

Property code	Value	Unit	Source
gf	-431.68	kJ/mol	Joback Method
hf	-748.08	kJ/mol	Joback Method
hfus	19.82	kJ/mol	Joback Method
hvap	54.87	kJ/mol	Joback Method
log10ws	-1.49		Crippen Method
logp	1.529		Crippen Method
mcvol	166.640	ml/mol	McGowan Method
pc	2340.56	kPa	Joback Method
tb	577.55	K	Joback Method
tc	767.26	K	Joback Method
tf	349.20	K	Joback Method
vc	0.632	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	492.32	J/mol×K	767.26	Joback Method
cpg	418.99	J/mol×K	577.55	Joback Method
cpg	432.86	J/mol×K	609.17	Joback Method
cpg	446.07	J/mol×K	640.79	Joback Method
cpg	458.60	J/mol×K	672.40	Joback Method
cpg	470.48	J/mol×K	704.02	Joback Method
cpg	481.72	J/mol×K	735.64	Joback Method
dvisc	0.0001715	Pa×s	577.55	Joback Method

dvisc	0.0021400	Pa×s	349.20	Joback Method
dvisc	0.0011428	Pa×s	387.26	Joback Method
dvisc	0.0006828	Pa×s	425.32	Joback Method
dvisc	0.0004439	Pa×s	463.38	Joback Method
dvisc	0.0003081	Pa×s	501.43	Joback Method
dvisc	0.0002252	Pa×s	539.49	Joback Method
hvapt	53.20	kJ/mol	399.00	NIST Webbook

Sources

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
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C2049709&Units=SI

Legend

cpg:	Ideal gas heat capacity
dvisc:	Dynamic viscosity
gf:	Standard Gibbs free energy of formation
hf:	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