Propanedioic acid, (ethoxymethylene)-, diethyl ester

Other names: Malonic acid, (ethoxymethylene)-, diethyl ester
(Ethoxymethylene)malonic acid diethyl ester
Diethyl (ethoxymethylene)malonate
Ethyl ethoxymethylenemalonate

Inchi: InChI=1S/C10H16O5/c1-4-13-7-8(9(11)14-5-2)10(12)15-6-3/h7H,4-6H2,1-3H3

InchiKey: LTMHNWPUDSTBKD-UHFFFAOYSA-N

Formula: C10H16O5

SMILES: CCOC=C(C(=O)OCC)C(=O)OCC

Mol. weight [g/mol]: 216.23

CAS: 87-13-8

Physical Properties

Property code	Value	Unit	Source
gf	-467.85	kJ/mol	Joback Method
hf	-764.12	kJ/mol	Joback Method
hfus	27.31	kJ/mol	Joback Method
hvap	58.61	kJ/mol	Joback Method
log10ws	-1.17		Crippen Method
logp	1.033		Crippen Method
mcvol	168.210	ml/mol	McGowan Method
pc	2388.85	kPa	Joback Method
tb	553.20	K	NIST Webbook
tc	796.12	K	Joback Method
tf	349.97	K	Joback Method
vc	0.642	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	420.62	J/mol×K	607.24	Joback Method
cpg	433.36	J/mol×K	638.72	Joback Method
cpg	445.53	J/mol×K	670.20	Joback Method
cpg	457.13	J/mol×K	701.68	Joback Method
cpg	468.16	J/mol×K	733.16	Joback Method

cpg	478.61	J/mol×K	764.64	Joback Method
cpg	488.47	J/mol×K	796.12	Joback Method

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C87138&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

cpg:	Ideal gas heat capacity
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
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