

Diethyl butylmalonate

Other names:	Malonic acid, butyl-, diethyl ester Butylmalonic acid diethyl ester Diethyl n-butylmalonate Ethyl butylmalonate Diethyl normal-butylmalonate n-Butylmalonic acid diethyl ester Propanedioic acid, butyl-, diethyl ester Diethyl 2-butylmalonate Butylpropanedioic acid diethyl ester
Inchi:	InChI=1S/C11H20O4/c1-4-7-8-9(10(12)14-5-2)11(13)15-6-3/h9H,4-8H2,1-3H3
InchiKey:	RPNFNBGRHCUORR-UHFFFAOYSA-N
Formula:	C11H20O4
SMILES:	CCCCC(C(=O)OCC)C(=O)OCC
Mol. weight [g/mol]:	216.27
CAS:	133-08-4

Physical Properties

Property code	Value	Unit	Source
gf	-428.54	kJ/mol	Joback Method
hf	-765.25	kJ/mol	Joback Method
hfus	26.30	kJ/mol	Joback Method
hvap	58.00	kJ/mol	Joback Method
log10ws	-1.91		Crippen Method
logp	1.919		Crippen Method
mcvol	180.730	ml/mol	McGowan Method
pc	2115.83	kPa	Joback Method
rinpol	1323.00		NIST Webbook
rinpol	1323.00		NIST Webbook
tb	510.70	K	NIST Webbook
tb	511.00 ± 6.00	K	NIST Webbook
tc	784.89	K	Joback Method
tf	343.05	K	Joback Method
vc	0.694	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	465.43	J/molxK	603.22	Joback Method
cpg	530.27	J/molxK	754.61	Joback Method
cpg	518.53	J/molxK	724.34	Joback Method
cpg	506.18	J/molxK	694.06	Joback Method
cpg	493.21	J/molxK	663.78	Joback Method
cpg	479.63	J/molxK	633.50	Joback Method
cpg	541.38	J/molxK	784.89	Joback Method
dvisc	0.0001589	Paxs	603.22	Joback Method
dvisc	0.0002087	Paxs	559.86	Joback Method
dvisc	0.0002868	Paxs	516.50	Joback Method
dvisc	0.0004178	Paxs	473.13	Joback Method
dvisc	0.0006567	Paxs	429.77	Joback Method
dvisc	0.0011425	Paxs	386.41	Joback Method
dvisc	0.0022861	Paxs	343.05	Joback Method

Sources

Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci9903071
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=C133084&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
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
tf:	Normal melting (fusion) point
vc:	Critical Volume

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