

Diethylmalonic acid, ethyl 2-octyl ester

Inchi:	InChI=1S/C17H32O4/c1-6-10-11-12-13-14(5)21-16(19)17(7-2,8-3)15(18)20-9-4/h14H,6-
InchiKey:	TVCMMTJELMXWCX-UHFFFAOYSA-N
Formula:	C17H32O4
SMILES:	CCCCCCC(C)OC(=O)C(CC)(CC)C(=O)OCC
Mol. weight [g/mol]:	300.43

Physical Properties

Property code	Value	Unit	Source
gf	-375.18	kJ/mol	Joback Method
hf	-897.84	kJ/mol	Joback Method
hfus	34.42	kJ/mol	Joback Method
hvap	70.06	kJ/mol	Joback Method
log10ws	-4.53		Crippen Method
logp	4.258		Crippen Method
mvol	265.270	ml/mol	McGowan Method
pc	1340.78	kPa	Joback Method
rinpol	1719.00		NIST Webbook
rinpol	1719.00		NIST Webbook
tb	737.27	K	Joback Method
tc	921.13	K	Joback Method
tf	413.09	K	Joback Method
vc	1.018	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	793.34	J/molxK	737.27	Joback Method
cpg	810.75	J/molxK	767.91	Joback Method
cpg	827.21	J/molxK	798.56	Joback Method
cpg	842.74	J/molxK	829.20	Joback Method
cpg	857.37	J/molxK	859.84	Joback Method
cpg	871.12	J/molxK	890.49	Joback Method
cpg	884.02	J/molxK	921.13	Joback Method
dvisc	0.0013901	Paxs	413.09	Joback Method

dvisc	0.0006127	Paxs	467.12	Joback Method
dvisc	0.0003200	Paxs	521.15	Joback Method
dvisc	0.0001889	Paxs	575.18	Joback Method
dvisc	0.0001220	Paxs	629.21	Joback Method
dvisc	0.0000845	Paxs	683.24	Joback Method
dvisc	0.0000617	Paxs	737.27	Joback Method

Sources

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=U369361&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws

Legend

cp_g:	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:	Log ₁₀ of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
m_cvol:	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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