

Malonic acid, 2-butyl dodecyl ester

Inchi:	InChI=1S/C19H36O4/c1-4-6-7-8-9-10-11-12-13-14-15-22-18(20)16-19(21)23-17(3)5-2/h
InchiKey:	HFDHRTPPTCPYJI-UHFFFAOYSA-N
Formula:	C19H36O4
SMILES:	CCCCCCCCCCCCOC(=O)CC(=O)OC(C)CC
Mol. weight [g/mol]:	328.49

Physical Properties

Property code	Value	Unit	Source
gf	-361.18	kJ/mol	Joback Method
hf	-930.37	kJ/mol	Joback Method
hfus	47.02	kJ/mol	Joback Method
hvap	75.81	kJ/mol	Joback Method
log10ws	-5.61		Crippen Method
logp	5.182		Crippen Method
mvol	293.450	ml/mol	McGowan Method
pc	1155.35	kPa	Joback Method
rinpol	2161.00		NIST Webbook
rinpol	2161.00		NIST Webbook
tb	786.26	K	Joback Method
tc	968.16	K	Joback Method
tf	433.21	K	Joback Method
vc	1.141	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	909.39	J/molxK	786.26	Joback Method
cpg	927.32	J/molxK	816.58	Joback Method
cpg	944.26	J/molxK	846.89	Joback Method
cpg	960.22	J/molxK	877.21	Joback Method
cpg	975.21	J/molxK	907.53	Joback Method
cpg	989.26	J/molxK	937.85	Joback Method
cpg	1002.36	J/molxK	968.16	Joback Method
dvisc	0.0011109	Paxs	433.21	Joback Method

dvisc	0.0005025	Paxs	492.05	Joback Method
dvisc	0.0002693	Paxs	550.89	Joback Method
dvisc	0.0001628	Paxs	609.74	Joback Method
dvisc	0.0001075	Paxs	668.58	Joback Method
dvisc	0.0000759	Paxs	727.42	Joback Method
dvisc	0.0000565	Paxs	786.26	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=U349077&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
g_f:	Standard Gibbs free energy of formation
h_f:	Enthalpy of formation at standard conditions
h_{fus}:	Enthalpy of fusion at standard conditions
h_{vap}:	Enthalpy of vaporization at standard conditions
log₁₀ws:	Log ₁₀ of Water solubility in mol/l
log_p:	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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