

Lactic acid, n-tetradecyl ester

Other names:	tetradecyl lactate
Inchi:	InChI=1S/C17H34O3/c1-3-4-5-6-7-8-9-10-11-12-13-14-15-20-17(19)16(2)18/h16,18H,3-
InchiKey:	BORJONZPSTVSFP-UHFFFAOYSA-N
Formula:	C17H34O3
SMILES:	CCCCCCCCCCCCCOC(=O)C(C)O
Mol. weight [g/mol]:	286.45
CAS:	1323-03-1

Physical Properties

Property code	Value	Unit	Source
gf	-280.92	kJ/mol	Joback Method
hf	-796.52	kJ/mol	Joback Method
hfus	43.14	kJ/mol	Joback Method
hvap	78.88	kJ/mol	Joback Method
log10ws	-5.18		Crippen Method
logp	4.612		Crippen Method
mcvol	263.700	ml/mol	McGowan Method
pc	1367.69	kPa	Joback Method
tb	756.39	K	Joback Method
tc	930.60	K	Joback Method
tf	304.00 ± 2.00	K	NIST Webbook
vc	1.024	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	808.17	J/mol×K	756.39	Joback Method
cpg	824.72	J/mol×K	785.42	Joback Method
cpg	840.45	J/mol×K	814.46	Joback Method
cpg	855.40	J/mol×K	843.49	Joback Method
cpg	869.56	J/mol×K	872.53	Joback Method
cpg	882.98	J/mol×K	901.56	Joback Method
cpg	895.65	J/mol×K	930.60	Joback Method
dvisc	0.0023196	Paxs	399.33	Joback Method

dvisc	0.0006252	Paxs	458.84	Joback Method
dvisc	0.0002277	Paxs	518.35	Joback Method
dvisc	0.0001021	Paxs	577.86	Joback Method
dvisc	0.0000532	Paxs	637.37	Joback Method
dvisc	0.0000310	Paxs	696.88	Joback Method
dvisc	0.0000196	Paxs	756.39	Joback Method
hvapt	86.40	kJ/mol	498.00	NIST Webbook

Sources

McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C1323031&Units=SI
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

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

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