Hexadecanoic acid, 1,2-ethanediyl ester

Other names:	Palmitic acid, ethylene ester
	Ethylene dipalmitate
	Ethylene glycol dihexadecanoate
	Ethylene glycol dipalmitate
	Ethylene palmitate
	1,2-Di-O-Hexadecanoylethanediol
	Ethanediol, dihexadecanoic acid, ester
	2-(Palmitoyloxy)ethyl palmitate
	ethane-1,2-diyl palmitate
Inchi:	InChI=1S/C34H66O4/c1-3-5-7-9-11-13-15-17-19-21-23-25-27-29-33(35)37-31-32-38-34(
InchiKey:	IKVCSHRLYCDSFD-UHFFFAOYSA-N
Formula:	C34H66O4
SMILES:	CCCCCCCCCCCCCCCC(=O)OCCOC(=O)CCCCCCCCCCCCCCC
Mol. weight [g/mol]:	538.89
CAS:	624-03-3

Physical Properties

Property code	Value	Unit	Source
gf	-232.44	kJ/mol	Joback Method
hf	-1234.69	kJ/mol	Joback Method
hfus	89.39	kJ/mol	Joback Method
hvap	109.59	kJ/mol	Joback Method
log10ws	-11.78		Crippen Method
logp	11.035		Crippen Method
mcvol	504.800	ml/mol	McGowan Method
pc	518.88	kPa	Joback Method
rinpol	3656.00		NIST Webbook
tb	1129.90	K	Joback Method
tc	1472.40	K	Joback Method
tf	342.30 ± 0.50	K	NIST Webbook
vc	1.988	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1869.04	J/mol×K	1129.90	Joback Method
cpg	1897.14	J/mol×K	1186.98	Joback Method
cpg	1921.20	J/mol×K	1244.07	Joback Method
cpg	1941.52	J/mol×K	1301.15	Joback Method
cpg	1958.38	J/mol×K	1358.23	Joback Method
cpg	1972.09	J/mol×K	1415.31	Joback Method
cpg	1982.95	J/mol×K	1472.40	Joback Method
dvisc	0.0001351	Pa×s	617.26	Joback Method
dvisc	0.0000585	Pa×s	702.70	Joback Method
dvisc	0.0000304	Pa×s	788.14	Joback Method
dvisc	0.0000179	Pa×s	873.58	Joback Method
dvisc	0.0000116	Pa×s	959.02	Joback Method
dvisc	0.0000081	Pa×s	1044.46	Joback Method
dvisc	0.0000059	Pa×s	1129.90	Joback Method

Sources

McGowan Method: http://link.springer.com/article/10.1007/BF02311772
NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C624033&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

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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