Glyceryl tri(acetylricinoleate)

Other names: 1,2,3-propanetriyl tris[(R)-12-(acetoxy)oleate]
Inchi: InChI=1S/C63H110O12/c1-7-10-13-34-43-57(72-54(4)64)46-37-28-22-16-19-25-31-40-4
InchiKey: RIXCYAQOGLLEIU-OTDRRXFESA-N
Formula: C63H110O12
SMILES: CCCCCCC(CC=CCCCCCCCC(=O)OCC(COC(=O)CCCCCCCC=CCC(CCCCCC)OC(C)=
Mol. weight [g/mol]: 1059.54
CAS: 101-34-8

Physical Properties

Property code	Value	Unit	Source
gf	-693.04	kJ/mol	Joback Method
hf	-2481.91	kJ/mol	Joback Method
hfus	162.16	kJ/mol	Joback Method
hvap	209.09	kJ/mol	Joback Method
log10ws	-19.38		Crippen Method
logp	16.722		Crippen Method
mcvol	930.270	ml/mol	McGowan Method
pc	216.14	kPa	Joback Method
tb	2109.30	K	Joback Method
tc	21893.24	K	Joback Method
tf	1157.49	K	Joback Method
vc	3.623	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	3544.26	J/mol×K	2109.30	Joback Method
cpg	23841.26	J/mol×K	5406.62	Joback Method
cpg	156126.42	J/mol×K	8703.95	Joback Method
cpg	507015.09	J/mol×K	12001.27	Joback Method
cpg	1183122.61	J/mol×K	15298.59	Joback Method
cpg	2291064.32	J/mol×K	18595.92	Joback Method
cpg	3937455.56	J/mol×K	21893.24	Joback Method
dvisc	7.1177060e-08	Pa×s	1157.49	Joback Method

dvisc	2.9273851e-08	Pa×s	1316.12	Joback Method
dvisc	1.4575755e-08	Pa×s	1474.76	Joback Method
dvisc	8.3101236e-09	Pa×s	1633.39	Joback Method
dvisc	5.2334379e-09	Pa×s	1792.03	Joback Method
dvisc	3.5532807e-09	Pa×s	1950.66	Joback Method
dvisc	2.5572039e-09	Pa×s	2109.30	Joback Method

Sources

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=C101348&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l

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
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume