Glyceryl monoricinoleate

Other names: (R)-12-hydroxyoleic acid, monoester with glycerol
Inchi: InChI=1S/C21H40O5/c1-2-3-4-11-14-19(23)15-12-9-7-5-6-8-10-13-16-21(25)26-18-20(24
InchiKey: HDIFHQMREAYYJW-XFXZXTDPSA-N
Formula: C21H40O5
SMILES: CCCCCCC(O)CC=CCCCCCCCC(=O)OCC(O)CO
Mol. weight [g/mol]: 372.54
CAS: 1323-38-2

Physical Properties

Property code	Value	Unit	Source
gf	-443.10	kJ/mol	Joback Method
hf	-1071.60	kJ/mol	Joback Method
hfus	58.35	kJ/mol	Joback Method
hvap	120.71	kJ/mol	Joback Method
log10ws	-5.34		Crippen Method
logp	3.891		Crippen Method
mcvol	327.500	ml/mol	McGowan Method
pc	1236.35	kPa	Joback Method
tb	1035.99	K	Joback Method
tc	1304.67	K	Joback Method
tf	545.97	K	Joback Method
vc	1.260	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1152.53	J/mol×K	1035.99	Joback Method
cpg	1230.59	J/mol×K	1259.89	Joback Method
cpg	1217.30	J/mol×K	1215.11	Joback Method
cpg	1202.99	J/mol×K	1170.33	Joback Method
cpg	1187.52	J/mol×K	1125.55	Joback Method
cpg	1170.74	J/mol×K	1080.77	Joback Method
cpg	1242.98	J/mol×K	1304.67	Joback Method
dvisc	7.4743958e-08	Pa×s	1035.99	Joback Method

dvisc	0.0000001	Pa×s	954.32	Joback Method
dvisc	0.0000003	Pa×s	872.65	Joback Method
dvisc	0.0000008	Pa×s	790.98	Joback Method
dvisc	0.0000025	Pa×s	709.31	Joback Method
dvisc	0.0000105	Pa×s	627.64	Joback Method
dvisc	0.0000681	Pa×s	545.97	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=C1323382&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws

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