Glycerol, 2,3-dimethyl, 1-pentadecanoate

Inchi: InChI=1S/C20H40O4/c1-4-5-6-7-8-9-10-11-12-13-14-15-16-20(21)24-18-19(23-3)17-22-2
InchiKey: NFAYSTGOYWTYNN-UHFFFAOYSA-N
Formula: C20H40O4
SMILES: CCCCCCCCCCCCCCC(=O)OCC(COC)OC
Mol. weight [g/mol]: 344.53

Physical Properties

Property code	Value	Unit	Source
gf	-328.84	kJ/mol	Joback Method
hf	-970.65	kJ/mol	Joback Method
hfus	49.20	kJ/mol	Joback Method
hvap	73.70	kJ/mol	Joback Method
log10ws	-5.34		Crippen Method
logp	5.282		Crippen Method
mcvol	311.840	ml/mol	McGowan Method
pc	1028.60	kPa	Joback Method
rinpol	2171.00		NIST Webbook
rinpol	2171.00		NIST Webbook
tb	777.69	K	Joback Method
tc	955.26	K	Joback Method
tf	416.78	K	Joback Method
vc	1.210	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	974.87	J/mol×K	777.69	Joback Method
cpg	1061.93	J/mol×K	925.67	Joback Method
cpg	1046.55	J/mol×K	896.07	Joback Method
cpg	1030.15	J/mol×K	866.48	Joback Method
cpg	1012.75	J/mol×K	836.88	Joback Method
cpg	994.32	J/mol×K	807.29	Joback Method
cpg	1076.32	J/mol×K	955.26	Joback Method
dvisc	0.0000385	Pa×s	777.69	Joback Method

dvisc	0.0000523	Pa×s	717.54	Joback Method
dvisc	0.0000751	Pa×s	657.39	Joback Method
dvisc	0.0001161	Pa×s	597.24	Joback Method
dvisc	0.0001979	Pa×s	537.08	Joback Method
dvisc	0.0003859	Pa×s	476.93	Joback Method
dvisc	0.0009126	Pa×s	416.78	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=R56549&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
rinpol:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume