Glutaric acid, cyclopentyl dec-2-yl ester

Inchi: InChI=1S/C20H36O4/c1-3-4-5-6-7-8-12-17(2)23-19(21)15-11-16-20(22)24-18-13-9-10-14
InchiKey: QHSDXIQEILYDNR-UHFFFAOYSA-N
Formula: C20H36O4
SMILES: CCCCCCCCC(C)OC(=O)CCCC(=O)OC1CCCC1
Mol. weight [g/mol]: 340.50

Physical Properties

Property code	Value	Unit	Source
gf	-316.21	kJ/mol	Joback Method
hf	-890.53	kJ/mol	Joback Method
hfus	43.54	kJ/mol	Joback Method
hvap	78.30	kJ/mol	Joback Method
log10ws	-6.04		Crippen Method
logp	5.325		Crippen Method
mcvol	296.680	ml/mol	McGowan Method
pc	1224.27	kPa	Joback Method
rinpol	2308.00		NIST Webbook
rinpol	2308.00		NIST Webbook
tb	824.42	K	Joback Method
tc	1018.78	K	Joback Method
tf	455.38	K	Joback Method
vc	1.139	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	962.52	J/mol×K	824.42	Joback Method
cpg	981.29	J/mol×K	856.81	Joback Method
cpg	998.83	J/mol×K	889.21	Joback Method
cpg	1015.19	J/mol×K	921.60	Joback Method
cpg	1030.38	J/mol×K	954.00	Joback Method
cpg	1044.44	J/mol×K	986.39	Joback Method
cpg	1057.40	J/mol×K	1018.78	Joback Method
dvisc	0.0012265	Pa×s	455.38	Joback Method

dvisc	0.0005781	Pa×s	516.89	Joback Method
dvisc	0.0003197	Pa×s	578.39	Joback Method
dvisc	0.0001981	Pa×s	639.90	Joback Method
dvisc	0.0001335	Pa×s	701.41	Joback Method
dvisc	0.0000959	Pa×s	762.91	Joback Method
dvisc	0.0000724	Pa×s	824.42	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=U405398&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

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