

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: CCCCCCCC(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
mvol	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	m ³ /kmol	Joback Method

Temperature Dependent Properties

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

dvisc	0.0005781	Paxs	516.89	Joback Method
dvisc	0.0003197	Paxs	578.39	Joback Method
dvisc	0.0001981	Paxs	639.90	Joback Method
dvisc	0.0001335	Paxs	701.41	Joback Method
dvisc	0.0000959	Paxs	762.91	Joback Method
dvisc	0.0000724	Paxs	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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