

Glutaric acid, 3,3-dimethylbut-2-yl pentyl ester

Inchi:	InChI=1S/C16H30O4/c1-6-7-8-12-19-14(17)10-9-11-15(18)20-13(2)16(3,4)5/h13H,6-12H
InchiKey:	FFDZXSTXHHHHQS-UHFFFAOYSA-N
Formula:	C16H30O4
SMILES:	CCCCCOC(=O)CCCC(=O)OC(C)C(C)(C)C
Mol. weight [g/mol]:	286.41

Physical Properties

Property code	Value	Unit	Source
gf	-383.60	kJ/mol	Joback Method
hf	-877.20	kJ/mol	Joback Method
hfus	31.83	kJ/mol	Joback Method
hvap	67.84	kJ/mol	Joback Method
log10ws	-4.12		Crippen Method
logp	3.868		Crippen Method
mcvol	251.180	ml/mol	McGowan Method
pc	1440.25	kPa	Joback Method
rinpol	1861.00		NIST Webbook
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tb	714.39	K	Joback Method
tc	898.38	K	Joback Method
tf	401.82	K	Joback Method
vc	0.963	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	736.17	J/molxK	714.39	Joback Method
cpg	753.26	J/molxK	745.06	Joback Method
cpg	769.43	J/molxK	775.72	Joback Method
cpg	784.70	J/molxK	806.39	Joback Method
cpg	799.10	J/molxK	837.05	Joback Method
cpg	812.65	J/molxK	867.72	Joback Method
cpg	825.37	J/molxK	898.38	Joback Method
dvisc	0.0015604	Paxs	401.82	Joback Method

dvisc	0.0006949	Paxs	453.91	Joback Method
dvisc	0.0003656	Paxs	506.01	Joback Method
dvisc	0.0002168	Paxs	558.11	Joback Method
dvisc	0.0001406	Paxs	610.20	Joback Method
dvisc	0.0000976	Paxs	662.30	Joback Method
dvisc	0.0000715	Paxs	714.39	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=U359751&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci9903071

Legend

cp_g:	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
h_{vap}:	Enthalpy of vaporization at standard conditions
log₁₀ws:	Log ₁₀ of Water solubility in mol/l
log_p:	Octanol/Water partition coefficient
m_{cvol}:	McGowan's characteristic volume
pc:	Critical Pressure
rin_{pol}:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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