Lauryl gallate

Other names:	n-Dodecyl gallate
	Dodecyl gallate
	Gallic acid n-dodecyl ester
	Benzoic acid, 3,4,5-trihydroxy-, dodecyl ester
	Gallic acid, dodecyl ester
	Gallic acid, lauryl ester
	Lauryl 3,4,5-trihydroxybenzoate
	Nipagallin LA
	Progallin LA
	Dodecylester kyseliny gallove
	Dodecyl 3,4,5-trihydroxybenzoate
	NSC 133463
Inchi:	InChI=1S/C19H30O5/c1-2-3-4-5-6-7-8-9-10-11-12-24-19(23)15-13-16(20)18(22)17(21)14
InchiKey:	RPWFJAMTCNSJKK-UHFFFAOYSA-N
Formula:	C19H30O5
SMILES:	CCCCCCCCCCCCOC(=O)c1cc(O)c(O)c(O)c1
Mol. weight [g/mol]:	338.44
CAS:	1166-52-5

Physical Properties

Property code	Value	Unit	Source
gf	-476.27	kJ/mol	Joback Method
hf	-975.69	kJ/mol	Joback Method
hfus	59.14	kJ/mol	Joback Method
hvap	108.36	kJ/mol	Joback Method
log10ws	-4.96		Crippen Method
logp	4.881		Crippen Method
mcvol	279.860	ml/mol	McGowan Method
pc	2032.72	kPa	Joback Method
tb	978.95	K	Joback Method
tc	1203.83	K	Joback Method
tf	737.63	K	Joback Method
vc	0.913	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	945.95	J/mol×K	978.95	Joback Method
cpg	963.54	J/mol×K	1016.43	Joback Method
cpg	981.34	J/mol×K	1053.91	Joback Method
cpg	999.54	J/mol×K	1091.39	Joback Method
cpg	1018.31	J/mol×K	1128.87	Joback Method
cpg	1037.84	J/mol×K	1166.35	Joback Method
cpg	1058.32	J/mol×K	1203.83	Joback Method
dvisc	0.0000001	Pa×s	737.63	Joback Method
dvisc	4.9917931e-08	Pa×s	777.85	Joback Method
dvisc	2.6465080e-08	Pa×s	818.07	Joback Method
dvisc	1.4890794e-08	Pa×s	858.29	Joback Method
dvisc	8.8210868e-09	Pa×s	898.51	Joback Method
dvisc	5.4652740e-09	Pa×s	938.73	Joback Method
dvisc	3.5219703e-09	Pa×s	978.95	Joback Method

Sources

McGowan Method: http://link.springer.com/article/10.1007/BF02311772
NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C1166525&Units=SI
Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method: https://www.chemeo.com/doc/models/crippen_log10ws
Joback Method: https://en.wikipedia.org/wiki/Joback_method

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