Nonanedioic acid, bis(2-methylpropyl) ester

Other names:	Azelaic acid, diisobutyl ester
	Diisobutyl azelate
	Hallco 3880
	Nonanedioic acid, di-(2-methylpropyl) ester
	Diisobutyl azelaate
Inchi:	InChI=1S/C17H32O4/c1-14(2)12-20-16(18)10-8-6-5-7-9-11-17(19)21-13-15(3)4/h14-15H
InchiKey:	KEVDDQOYWPSMFD-UHFFFAOYSA-N
Formula:	C17H32O4
SMILES:	CC(C)COC(=O)CCCCCCCC(=O)OCC(C)C
Mol. weight [g/mol]:	300.43
CAS:	105-80-6

Physical Properties

Property code	Value	Unit	Source
chl	-10085.10 ± 1.90	kJ/mol	NIST Webbook
gf	-380.46	kJ/mol	Joback Method
hf	-894.37	kJ/mol	Joback Method
hfl	-1177.90 ± 1.90	kJ/mol	NIST Webbook
hfus	38.31	kJ/mol	Joback Method
hvap	70.97	kJ/mol	Joback Method
log10ws	-4.18		Crippen Method
logp	4.115		Crippen Method
mcvol	265.270	ml/mol	McGowan Method
pc	1330.04	kPa	Joback Method
rinpol	1952.00		NIST Webbook
tb	740.06	K	Joback Method
tc	920.59	K	Joback Method
tf	395.67	K	Joback Method
vc	1.024	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	792.00	J/mol×K	740.06	Joback Method

cpg	809.35	J/mol×K	770.15	Joback Method
cpg	825.78	J/mol×K	800.24	Joback Method
cpg	841.31	J/mol×K	830.32	Joback Method
cpg	855.95	J/mol×K	860.41	Joback Method
cpg	869.70	J/mol×K	890.50	Joback Method
cpg	882.59	J/mol×K	920.59	Joback Method
dvisc	0.0016971	Pa×s	395.67	Joback Method
dvisc	0.0007096	Pa×s	453.07	Joback Method
dvisc	0.0003610	Pa×s	510.47	Joback Method
dvisc	0.0002105	Pa×s	567.87	Joback Method
dvisc	0.0001355	Pa×s	625.26	Joback Method
dvisc	0.0000940	Pa×s	682.66	Joback Method
dvisc	0.0000690	Pa×s	740.06	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=C105806&Units=SI
Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l

Legend

chl: Standard liquid enthalpy of combustion
cpg: Ideal gas heat capacity
dvisc: Dynamic viscosity
gf: Standard Gibbs free energy of formation
hf: Enthalpy of formation at standard conditions
hfl: Liquid phase 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