Nonanedioic acid, monomethyl ester

Other names:	Azelaic acid, monomethyl ester
	Methyl hydrogen azelate
	Monomethyl azelate
	Monomethyl nonanedioate
	8-Carbomethoxyoctanoic acid
Inchi:	InChI=1S/C10H18O4/c1-14-10(13)8-6-4-2-3-5-7-9(11)12/h2-8H2,1H3,(H,11,12)
InchiKey:	VVWPSAPZUZXYCM-UHFFFAOYSA-N
Formula:	C10H18O4
SMILES:	COC(=O)CCCCCCCC(=O)O
Mol. weight [g/mol]:	202.25
CAS:	2104-19-0

Physical Properties

Property code	Value	Unit	Source
gf	-466.34	kJ/mol	Joback Method
hf	-759.34	kJ/mol	Joback Method
hfus	30.13	kJ/mol	Joback Method
hvap	70.44	kJ/mol	Joback Method
log10ws	-1.97		Crippen Method
logp	1.975		Crippen Method
mcvol	166.640	ml/mol	McGowan Method
pc	2558.51	kPa	Joback Method
tb	650.54	K	Joback Method
tc	825.37	K	Joback Method
tf	385.37	K	Joback Method
vc	0.644	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	446.48	J/mol×K	650.54	Joback Method
cpg	457.93	J/mol×K	679.68	Joback Method
cpg	468.85	J/mol×K	708.82	Joback Method
cpg	479.25	J/mol×K	737.96	Joback Method

cpg	489.14	J/mol×K	767.09	Joback Method
cpg	498.52	J/mol×K	796.23	Joback Method
cpg	507.39	J/mol×K	825.37	Joback Method
dvisc	0.0029033	Pa×s	385.37	Joback Method
dvisc	0.0011146	Pa×s	429.56	Joback Method
dvisc	0.0005116	Pa×s	473.76	Joback Method
dvisc	0.0002682	Pa×s	517.95	Joback Method
dvisc	0.0001556	Pa×s	562.15	Joback Method
dvisc	0.0000977	Pa×s	606.35	Joback Method
dvisc	0.0000654	Pa×s	650.54	Joback Method

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	432.70	K	0.40	NIST Webbook

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=C2104190&Units=SI
Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l

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
tbrp:	Boiling point at reduced pressure
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume