8-Octadecenoic acid, methyl ester

Other names: Methyl 8-octadecenoate
Inchi: InChI=1S/C19H36O2/c1-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19(20)21-2/h11-12H
InchiKey: KXOOHHMDCDXCBV-VAWYXSNFSA-N
Formula: C19H36O2
SMILES: CCCCCCCCCC=CCCCCCCC(=O)OC
Mol. weight [g/mol]: 296.49
CAS: 2345-29-1

Physical Properties

Property code	Value	Unit	Source
gf	-44.60	kJ/mol	Joback Method
hf	-563.07	kJ/mol	Joback Method
hfus	47.95	kJ/mol	Joback Method
hvap	67.00	kJ/mol	Joback Method
log10ws	-6.49		Crippen Method
logp	6.197		Crippen Method
mcvol	281.710	ml/mol	McGowan Method
pc	1153.78	kPa	Joback Method
rinpol	2107.00		NIST Webbook
rinpol	2080.00		NIST Webbook
rinpol	2075.00		NIST Webbook
rinpol	2080.00		NIST Webbook
rinpol	2107.00		NIST Webbook
tb	714.57	K	Joback Method
tc	887.77	K	Joback Method
tf	370.97	K	Joback Method
vc	1.103	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	826.19	J/mol×K	714.57	Joback Method
cpg	844.92	J/mol×K	743.44	Joback Method
cpg	862.78	J/mol×K	772.30	Joback Method

cpg	879.80	J/mol×K	801.17	Joback Method
cpg	896.00	J/mol×K	830.04	Joback Method
cpg	911.43	J/mol×K	858.90	Joback Method
cpg	926.09	J/mol×K	887.77	Joback Method
dvisc	0.0017193	Pa×s	370.97	Joback Method
dvisc	0.0007124	Pa×s	428.24	Joback Method
dvisc	0.0003634	Pa×s	485.50	Joback Method
dvisc	0.0002137	Pa×s	542.77	Joback Method
dvisc	0.0001390	Pa×s	600.04	Joback Method
dvisc	0.0000975	Pa×s	657.30	Joback Method
dvisc	0.0000724	Pa×s	714.57	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=C2345291&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