Tricosanoic acid, methyl ester

Other names: Methyl tricosanoate
23:0, Me ester
Inchi: InChI=1S/C24H48O2/c1-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-21-22-23-24(2
InchiKey: VORKGRIRMPBCCZ-UHFFFAOYSA-N
Formula: C24H48O2
SMILES: CCCCCCCCCCCCCCCCCCCCCCC(=O)OC
Mol. weight [g/mol]: 368.64
CAS: 2433-97-8

Physical Properties

Property code	Value	Unit	Source
gf	-82.72	kJ/mol	Joback Method
hf	-783.49	kJ/mol	Joback Method
hfus	60.70	kJ/mol	Joback Method
hvap	78.17	kJ/mol	Joback Method
log10ws	-8.73		Crippen Method
logp	8.371		Crippen Method
mcvol	356.460	ml/mol	McGowan Method
pc	827.64	kPa	Joback Method
rinpol	2631.00		NIST Webbook
rinpol	2612.00		NIST Webbook
rinpol	2615.00		NIST Webbook
rinpol	2628.20		NIST Webbook
rinpol	2631.00		NIST Webbook
rinpol	2614.00		NIST Webbook
rinpol	2612.00		NIST Webbook
rinpol	435.60		NIST Webbook
rinpol	435.70		NIST Webbook
rinpol	417.31		NIST Webbook
rinpol	435.60		NIST Webbook
rinpol	2628.20		NIST Webbook
rinpol	2632.00		NIST Webbook
rinpol	2615.00		NIST Webbook
ripol	2951.00		NIST Webbook
ripol	2922.00		NIST Webbook
tb	824.81	K	Joback Method
tc	1009.81	K	Joback Method

tf	432.40	K	Joback Method
vc	1.403	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1156.81	J/mol×K	824.81	Joback Method
cpg	1178.47	J/mol×K	855.64	Joback Method
cpg	1198.97	J/mol×K	886.48	Joback Method
cpg	1218.34	J/mol×K	917.31	Joback Method
cpg	1236.63	J/mol×K	948.14	Joback Method
cpg	1253.86	J/mol×K	978.97	Joback Method
cpg	1270.08	J/mol×K	1009.81	Joback Method
dvisc	0.0010603	Pa×s	432.40	Joback Method
dvisc	0.0004342	Pa×s	497.80	Joback Method
dvisc	0.0002188	Pa×s	563.20	Joback Method
dvisc	0.0001271	Pa×s	628.61	Joback Method
dvisc	0.0000818	Pa×s	694.01	Joback Method
dvisc	0.0000568	Pa×s	759.41	Joback Method
dvisc	0.0000418	Pa×s	824.81	Joback Method
hvapt	99.80	kJ/mol	500.50	NIST Webbook

Sources

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
McGowan Method: http://link.springer.com/article/10.1007/BF02311772
NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C2433978&Units=SI

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
hvapt:	Enthalpy of vaporization at a given temperature
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
ripol:	Polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume