Ethyl tetracosanoate

Other names:	Ethyl tetracosanate
	Ethyl lignocerate
	Lignoceric acid ethyl ester
	Tetracosanoic acid, ethyl ester
Inchi:	InChI=1S/C26H52O2/c1-3-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-21-22-23-24-25
InchiKey:	AKXFYSSXNQQBNT-UHFFFAOYSA-N
Formula:	C26H52O2
SMILES:	CCCCCCCCCCCCCCCCCCCCCCCC(=O)OCC
Mol. weight [g/mol]:	396.69
CAS:	24634-95-5

Physical Properties

Property code	Value	Unit	Source
gf	-65.88	kJ/mol	Joback Method
hf	-824.77	kJ/mol	Joback Method
hfus	65.88	kJ/mol	Joback Method
hvap	82.63	kJ/mol	Joback Method
log10ws	-9.57		Crippen Method
logp	9.152		Crippen Method
mcvol	384.640	ml/mol	McGowan Method
pc	743.26	kPa	Joback Method
rinpol	2797.00		NIST Webbook
rinpol	2779.13		NIST Webbook
tb	870.57	K	Joback Method
tc	1067.44	K	Joback Method
tf	454.94	K	Joback Method
vc	1.516	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1403.78	J/mol×K	1067.44	Joback Method
cpg	1387.08	J/mol×K	1034.63	Joback Method
cpg	1369.24	J/mol×K	1001.82	Joback Method

cpg	1350.19	J/mol×K	969.01	Joback Method
cpg	1329.90	J/mol×K	936.19	Joback Method
cpg	1308.31	J/mol×K	903.38	Joback Method
cpg	1285.37	J/mol×K	870.57	Joback Method
dvisc	0.0008279	Pa×s	454.94	Joback Method
dvisc	0.0000311	Pa×s	870.57	Joback Method
dvisc	0.0000424	Pa×s	801.30	Joback Method
dvisc	0.0000614	Pa×s	732.03	Joback Method
dvisc	0.0000959	Pa×s	662.75	Joback Method
dvisc	0.0001664	Pa×s	593.48	Joback Method
dvisc	0.0003338	Pa×s	524.21	Joback Method
hfust	22.94	kJ/mol	327.40	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=C24634955&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

hfust: Enthalpy of fusion at a given temperature

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