Ethylene glycol distearate

Inchi: InChI=1S/C38H74O4/c1-3-5-7-9-11-13-15-17-19-21-23-25-27-29-31-33-37(39)41-35-36-
InchiKey: FPVVYTCTZKCSOJ-UHFFFAOYSA-N
Formula: C38H74O4
SMILES: CCCCCCCCCCCCCCCCCC(=O)OCCOC(=O)CCCCCCCCCCCCCCCCC
Mol. weight [g/mol]: 594.99

Physical Properties

Property code	Value	Unit	Source
gf	-198.76	kJ/mol	Joback Method
hf	-1317.25	kJ/mol	Joback Method
hfus	99.75	kJ/mol	Joback Method
hvap	118.49	kJ/mol	Joback Method
log10ws	-13.45		Crippen Method
logp	12.596		Crippen Method
mcvol	561.160	ml/mol	McGowan Method
pc	438.77	kPa	Joback Method
tb	1221.42	K	Joback Method
tc	1677.63	K	Joback Method
tf	662.34	K	Joback Method
vc	2.212	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	2134.73	J/mol×K	1221.42	Joback Method
cpg	2167.37	J/mol×K	1297.46	Joback Method
cpg	2193.47	J/mol×K	1373.49	Joback Method
cpg	2213.88	J/mol×K	1449.53	Joback Method
cpg	2229.41	J/mol×K	1525.56	Joback Method
cpg	2240.89	J/mol×K	1601.60	Joback Method
cpg	2249.16	J/mol×K	1677.63	Joback Method
dvisc	0.0000744	Pa×s	662.34	Joback Method
dvisc	0.0000314	Pa×s	755.52	Joback Method
dvisc	0.0000160	Pa×s	848.70	Joback Method

dvisc	0.0000094	Pa×s	941.88	Joback Method
dvisc	0.0000060	Pa×s	1035.06	Joback Method
dvisc	0.0000042	Pa×s	1128.24	Joback Method
dvisc	0.0000030	Pa×s	1221.42	Joback Method

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=B6003667&Units=SI
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

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
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume