Fumaric acid, dec-4-enyl octadecyl ester

Inchi: InChI=1S/C32H58O4/c1-3-5-7-9-11-13-14-15-16-17-18-19-20-22-24-26-30-36-32(34)28-
InchiKey: KHIDZLVZWLMZTJ-KQHZTYPXSA-N
Formula: C32H58O4
SMILES: CCCCCC=CCCCOC(=O)C=CC(=O)OCCCCCCCCCCCCCCCCCC
Mol. weight [g/mol]: 506.80

Physical Properties

Property code	Value	Unit	Source
gf	-88.84	kJ/mol	Joback Method
hf	-958.97	kJ/mol	Joback Method
hfus	84.61	kJ/mol	Joback Method
hvap	105.05	kJ/mol	Joback Method
log10ws	-10.65		Crippen Method
logp	9.807		Crippen Method
mcvol	468.020	ml/mol	McGowan Method
pc	596.63	kPa	Joback Method
rinpol	3598.00		NIST Webbook
rinpol	3598.00		NIST Webbook
tb	1092.46	K	Joback Method
tc	1381.03	K	Joback Method
tf	584.56	K	Joback Method
vc	1.835	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1680.26	J/mol×K	1092.46	Joback Method
cpg	1788.50	J/mol×K	1332.94	Joback Method
cpg	1770.33	J/mol×K	1284.84	Joback Method
cpg	1750.65	J/mol×K	1236.75	Joback Method
cpg	1729.22	J/mol×K	1188.65	Joback Method
cpg	1705.83	J/mol×K	1140.56	Joback Method
cpg	1805.39	J/mol×K	1381.03	Joback Method
dvisc	0.0000064	Pa×s	1092.46	Joback Method

dvisc	0.0000088	Pa×s	1007.81	Joback Method
dvisc	0.0000126	Pa×s	923.16	Joback Method
dvisc	0.0000196	Pa×s	838.51	Joback Method
dvisc	0.0000335	Pa×s	753.86	Joback Method
dvisc	0.0000656	Pa×s	669.21	Joback Method
dvisc	0.0001563	Pa×s	584.56	Joback Method

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=U348952&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
rinpol:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume