Triethylene glycol monododecyl ether

Other names:	Ethanol, 2-[2-[2-(dodecyloxy)ethoxy]ethoxy]-
	2-(2-(2-(Dodecyloxy)ethoxy)ethoxy)ethanol
	Dodecyl triethylene glycol ether
	Lauryl alcohol triglycol ether
	Lauryl triethoxylate
	Lauryltriglycol ether
	LEA
	Triethylene glycol dodecyl ether
	Triethylene glycol lauryl ether
	Tris(oxyethylene) dodecyl ether
Inchi:	InChI=1S/C18H38O4/c1-2-3-4-5-6-7-8-9-10-11-13-20-15-17-22-18-16-21-14-12-19/h19H
InchiKey:	FKMHSNTVILORFA-UHFFFAOYSA-N
Formula:	C18H38O4
SMILES:	CCCCCCCCCCCCOCCOCCOCCO
Mol. weight [g/mol]:	318.49
CAS:	3055-94-5

Physical Properties

Property code	Value	Unit	Source
gf	-351.14	kJ/mol	Joback Method
hf	-963.74	kJ/mol	Joback Method
hfus	50.03	kJ/mol	Joback Method
hvap	79.57	kJ/mol	Joback Method
log10ws	-3.88		Crippen Method
logp	3.949		Crippen Method
mcvol	287.960	ml/mol	McGowan Method
pc	1184.97	kPa	Joback Method
tb	770.68	K	Joback Method
tc	944.12	K	Joback Method
tf	420.13	K	Joback Method
vc	1.117	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	903.63	J/mol×K	770.68	Joback Method
cpg	921.63	J/mol×K	799.59	Joback Method
cpg	938.73	J/mol×K	828.49	Joback Method
cpg	954.95	J/mol×K	857.40	Joback Method
cpg	970.27	J/mol×K	886.31	Joback Method
cpg	984.73	J/mol×K	915.21	Joback Method
cpg	998.31	J/mol×K	944.12	Joback Method
dvisc	0.0008961	Pa×s	420.13	Joback Method
dvisc	0.0002729	Pa×s	478.56	Joback Method
dvisc	0.0001077	Pa×s	536.98	Joback Method
dvisc	0.0000510	Pa×s	595.40	Joback Method
dvisc	0.0000276	Pa×s	653.83	Joback Method
dvisc	0.0000165	Pa×s	712.25	Joback Method
dvisc	0.0000107	Pa×s	770.68	Joback Method
hvapt	102.70	kJ/mol	499.00	NIST Webbook

Sources

McGowan Method: http://link.springer.com/article/10.1007/BF02311772
NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C3055945&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

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

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