Diethylene glycol monododecyl ether

Other names:	Ethanol, 2-[2-(dodecyloxy)ethoxy]-
	Akyporox RLM 22
	Laureth-2
	2-[2-(dodecyloxy)ethoxy]ethanol
Inchi:	InChI=1S/C16H34O3/c1-2-3-4-5-6-7-8-9-10-11-13-18-15-16-19-14-12-17/h17H,2-16H2,1
InchiKey:	AZLWQVJVINEILY-UHFFFAOYSA-N
Formula:	C16H34O3
SMILES:	CCCCCCCCCCCCOCCOCCO
Mol. weight [g/mol]:	274.44
CAS:	3055-93-4

Physical Properties

Property code	Value	Unit	Source
gf	-262.98	kJ/mol	Joback Method
hf	-790.24	kJ/mol	Joback Method
hfus	43.66	kJ/mol	Joback Method
hvap	72.71	kJ/mol	Joback Method
log10ws	-3.96		Crippen Method
logp	3.933		Crippen Method
mcvol	253.910	ml/mol	McGowan Method
pc	1375.82	kPa	Joback Method
tb	702.50	K	Joback Method
tc	866.38	K	Joback Method
tf	375.36	K	Joback Method
vc	0.987	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	844.77	J/mol×K	866.38	Joback Method
cpg	831.45	J/mol×K	839.07	Joback Method
cpg	817.46	J/mol×K	811.75	Joback Method
cpg	802.77	J/mol×K	784.44	Joback Method
cpg	787.39	J/mol×K	757.13	Joback Method

cpg	771.30	J/mol×K	729.81	Joback Method
cpg	754.49	J/mol×K	702.50	Joback Method
dvisc	0.0023629	Pa×s	375.36	Joback Method
dvisc	0.0000217	Pa×s	702.50	Joback Method
dvisc	0.0000341	Pa×s	647.98	Joback Method
dvisc	0.0000583	Pa×s	593.45	Joback Method
dvisc	0.0001111	Pa×s	538.93	Joback Method
dvisc	0.0002447	Pa×s	484.41	Joback Method
dvisc	0.0006586	Pa×s	429.88	Joback Method
hvapt	82.10	kJ/mol	468.50	NIST Webbook

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C3055934&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
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

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