Heptaethylene glycol

Other names:	3,6,9,12,15,18-Hexaoxaeicosane-1,20-diol
	2-[2-[2-[2-[2-[2-(2-Hydroxyethoxy)ethoxy]ethoxy]ethoxy]ethoxy]ethoxy]ethanol
	3,6,9,12,15,18-hexaoxaicosane-1,20-diol
Inchi:	InChI=1S/C14H30O8/c15-1-3-17-5-7-19-9-11-21-13-14-22-12-10-20-8-6-18-4-2-16/h15-1
InchiKey:	XPJRQAIZZQMSCM-UHFFFAOYSA-N
Formula:	C14H30O8
SMILES:	OCCOCCOCCOCCOCCOCCOCCO
Mol. weight [g/mol]:	326.38
CAS:	5617-32-3

Physical Properties

Property code	Value	Unit	Source
gf	-836.64	kJ/mol	Joback Method
hf	-1430.07	kJ/mol	Joback Method
hfus	47.32	kJ/mol	Joback Method
hvap	94.58	kJ/mol	Joback Method
log10ws	1.27		Crippen Method
logp	-0.929		Crippen Method
mcvol	255.080	ml/mol	McGowan Method
pc	1625.91	kPa	Joback Method
rinpol	2364.60		NIST Webbook
rinpol	2364.00		NIST Webbook
rinpol	2364.60		NIST Webbook
tb	838.60	K	Joback Method
tc	1027.90	K	Joback Method
tf	280.85 ± 0.70	K	NIST Webbook
vc	0.966	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	827.34	J/mol×K	838.60	Joback Method
cpg	841.83	J/mol×K	870.15	Joback Method
cpg	855.25	J/mol×K	901.70	Joback Method

cpg	867.58	J/mol×K	933.25	Joback Method
cpg	878.80	J/mol×K	964.80	Joback Method
cpg	888.86	J/mol×K	996.35	Joback Method
cpg	897.74	J/mol×K	1027.90	Joback Method
dvisc	0.0001130	Pa×s	502.56	Joback Method
dvisc	0.0000355	Pa×s	558.57	Joback Method
dvisc	0.0000138	Pa×s	614.57	Joback Method
dvisc	0.0000063	Pa×s	670.58	Joback Method
dvisc	0.0000032	Pa×s	726.59	Joback Method
dvisc	0.0000018	Pa×s	782.59	Joback Method
dvisc	0.0000011	Pa×s	838.60	Joback Method

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=C5617323&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
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

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