Pentaethylene glycol, nonyl ether

Other names: 2-(2-(2-(2-(2-nonyloxy-ethoxy)-ethoxy)-ethoxy)-ethoxy)-ethanol
Inchi: InChI=1S/C19H40O6/c1-2-3-4-5-6-7-8-10-21-12-14-23-16-18-25-19-17-24-15-13-22-11-9
InchiKey: IMRGTADRXKJFSM-UHFFFAOYSA-N
Formula: C19H40O6
SMILES: CCCCCCCCCOCCOCCOCCOCCOCCO
Mol. weight [g/mol]: 364.52

Physical Properties

Property code	Value	Unit	Source
gf	-552.72	kJ/mol	Joback Method
hf	-1248.82	kJ/mol	Joback Method
hfus	54.99	kJ/mol	Joback Method
hvap	86.62	kJ/mol	Joback Method
log10ws	-2.48		Crippen Method
logp	2.812		Crippen Method
mcvol	313.790	ml/mol	McGowan Method
pc	1085.63	kPa	Joback Method
rinpol	2635.90		NIST Webbook
rinpol	2635.90		NIST Webbook
tb	838.40	K	Joback Method
tc	1027.56	K	Joback Method
tf	475.86	K	Joback Method
vc	1.208	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1028.39	J/mol×K	838.40	Joback Method
cpg	1109.10	J/mol×K	996.03	Joback Method
cpg	1095.43	J/mol×K	964.51	Joback Method
cpg	1080.52	J/mol×K	932.98	Joback Method
cpg	1064.37	J/mol×K	901.45	Joback Method
cpg	1046.99	J/mol×K	869.93	Joback Method
cpg	1121.51	J/mol×K	1027.56	Joback Method

dvisc	0.0000045	Pa×s	838.40	Joback Method
dvisc	0.0000068	Pa×s	777.98	Joback Method
dvisc	0.0000110	Pa×s	717.55	Joback Method
dvisc	0.0000194	Pa×s	657.13	Joback Method
dvisc	0.0000384	Pa×s	596.71	Joback Method
dvisc	0.0000886	Pa×s	536.28	Joback Method
dvisc	0.0002528	Pa×s	475.86	Joback Method

Sources

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=R184164&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws

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