Hexaethylene glycol, decyl ether, acetate

Other names: 2-(2-(2-(2-(2-(2-decyloxy-ethoxy)-ethoxy)-ethoxy)-ethoxy)-ethoxy)-ethanol, acetate
Inchi: InChI=1S/C24H48O8/c1-3-4-5-6-7-8-9-10-11-26-12-13-27-14-15-28-16-17-29-18-19-30-2
InchiKey: JLTZIBFHUNUDGN-UHFFFAOYSA-N
Formula: C24H48O8
SMILES: CCCCCCCCCCOCCOCCOCCOCCOCCOCCOC(C)=O
Mol. weight [g/mol]: 464.63

Physical Properties

Property code	Value	Unit	Source
gf	-712.72	kJ/mol	Joback Method
hf	-1576.81	kJ/mol	Joback Method
hfus	67.83	kJ/mol	Joback Method
hvap	92.63	kJ/mol	Joback Method
log10ws	-3.26		Crippen Method
logp	3.790		Crippen Method
mcvol	391.680	ml/mol	McGowan Method
pc	781.12	kPa	Joback Method
rinpol	3140.30		NIST Webbook
rinpol	3140.30		NIST Webbook
tb	959.33	K	Joback Method
tc	1188.52	K	Joback Method
tf	565.78	K	Joback Method
vc	1.512	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1354.86	J/mol×K	959.33	Joback Method
cpg	1374.82	J/mol×K	997.53	Joback Method
cpg	1392.33	J/mol×K	1035.73	Joback Method
cpg	1407.35	J/mol×K	1073.93	Joback Method
cpg	1419.84	J/mol×K	1112.12	Joback Method
cpg	1429.76	J/mol×K	1150.32	Joback Method
cpg	1437.08	J/mol×K	1188.52	Joback Method

dvisc	0.0000970	Pa×s	565.78	Joback Method
dvisc	0.0000494	Pa×s	631.37	Joback Method
dvisc	0.0000286	Pa×s	696.96	Joback Method
dvisc	0.0000182	Pa×s	762.55	Joback Method
dvisc	0.0000124	Pa×s	828.15	Joback Method
dvisc	0.0000090	Pa×s	893.74	Joback Method
dvisc	0.0000068	Pa×s	959.33	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=R184055&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