2,5,8,11,14,17,20-HEPTAOXAHENEICOSANE

Other names: 2,5,8,11,14,17,20-heptaoxahenicosane
hexaglyme
Inchi: InChI=1S/C14H30O7/c1-15-3-5-17-7-9-19-11-13-21-14-12-20-10-8-18-6-4-16-2/h3-14H2
InchiKey: VMCIKMLQXFLKAX-UHFFFAOYSA-N
Formula: C14H30O7
SMILES: COCCOCCOCCOCCOCCOCCOC
Mol. weight [g/mol]: 310.39

Physical Properties

Property code	Value	Unit	Source
af	0.9302		Cheméo Relay (1.0)
gf	-668.00	kJ/mol	Joback Method
hf	-1180.76	kJ/mol	Cheméo Relay (1.0)
hfus	40.33	kJ/mol	Joback Method
hvap	87.62	kJ/mol	Cheméo Relay (1.0)
ie	9.50	eV	Cheméo Relay (1.0)
log10ws	-0.30		Cheméo Relay (1.0)
logp	0.362		Crippen Method
mcvol	249.210	ml/mol	McGowan Method
pc	1391.25	kPa	Joback Method
tb	613.41	K	Cheméo Relay (1.0)
tc	759.05	K	Cheméo Relay (1.0)
tf	229.07	K	Cheméo Relay (1.0)
vc	0.967	m3/kmol	Cheméo Relay (1.0)

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	719.11	J/mol×K	676.66	Joback Method
cpg	736.06	J/mol×K	704.03	Joback Method
cpg	752.34	J/mol×K	731.39	Joback Method
cpg	767.93	J/mol×K	758.76	Joback Method
cpg	782.81	J/mol×K	786.12	Joback Method
cpg	796.93	J/mol×K	813.49	Joback Method

cpg	810.28	J/mol×K	840.86	Joback Method
dvisc	0.0003967	Pa×s	403.15	Joback Method
dvisc	0.0002122	Pa×s	448.74	Joback Method
dvisc	0.0001274	Pa×s	494.32	Joback Method
dvisc	0.0000833	Pa×s	539.90	Joback Method
dvisc	0.0000583	Pa×s	585.49	Joback Method
dvisc	0.0000429	Pa×s	631.07	Joback Method
dvisc	0.0000329	Pa×s	676.66	Joback Method

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C1072408&Units=SI
Joback Method:	https://en.wikipedia.org/wiki/Joback_method
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Cheméo Relay (1.0):	
Cheméo Relay (1.0, beta):	
Effect of properties of the N,N-dimethylformamide-methanol and N,N-dimethylformamide-water mixtures on the solution enthalpy of glymes in these mixtures at 298.15 K:	https://www.doi.org/10.1016/j.tca.2017.03.001

Legend

af:	Acentric Factor
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
ie:	Ionization energy
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