2-(2-(2-(2-(2-(2-decyloxy-ethoxy)-ethoxy)-ethoxy)-ethoxy)-e

Other names: Hexaethylene glycol, decyl ether
Inchi: InChI=1S/C22H46O7/c1-2-3-4-5-6-7-8-9-11-24-13-15-26-17-19-28-21-22-29-20-18-27-16
InchiKey: GLGQRQQFWLTGES-UHFFFAOYSA-N
Formula: C22H46O7
SMILES: CCCCCCCCCCOCCOCCOCCOCCOCCOCCO
Mol. weight [g/mol]: 422.60

Physical Properties

Property code	Value	Unit	Source
gf	-632.46	kJ/mol	Joback Method
hf	-1442.96	kJ/mol	Joback Method
hfus	63.95	kJ/mol	Joback Method
hvap	95.70	kJ/mol	Joback Method
log10ws	-2.82		Crippen Method
logp	3.219		Crippen Method
mcvol	361.930	ml/mol	McGowan Method
pc	896.41	kPa	Joback Method
rinpol	3016.40		NIST Webbook
rinpol	3016.40		NIST Webbook
tb	929.46	K	Joback Method
tc	1153.01	K	Joback Method
tf	531.90	K	Joback Method
vc	1.395	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1247.27	J/mol×K	929.46	Joback Method
cpg	1328.19	J/mol×K	1115.75	Joback Method
cpg	1316.18	J/mol×K	1078.49	Joback Method
cpg	1302.06	J/mol×K	1041.24	Joback Method
cpg	1285.85	J/mol×K	1003.98	Joback Method
cpg	1267.58	J/mol×K	966.72	Joback Method
cpg	1338.07	J/mol×K	1153.01	Joback Method

dvisc	0.0000018	Pa×s	929.46	Joback Method
dvisc	0.0000027	Pa×s	863.20	Joback Method
dvisc	0.0000043	Pa×s	796.94	Joback Method
dvisc	0.0000074	Pa×s	730.68	Joback Method
dvisc	0.0000144	Pa×s	664.42	Joback Method
dvisc	0.0000322	Pa×s	598.16	Joback Method
dvisc	0.0000880	Pa×s	531.90	Joback Method

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=R184040&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
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