

Tetraethylene glycol, decyl ether

Other names:	2-(2-(2-(2-decyloxy-ethoxy)-ethoxy)-ethoxy)-ethanol
Inchi:	InChI=1S/C18H38O5/c1-2-3-4-5-6-7-8-9-11-20-13-15-22-17-18-23-16-14-21-12-10-19/h1
InchiKey:	ASMWUUUCZFNHL-UHFFFAOYSA-N
Formula:	C18H38O5
SMILES:	CCCCCCCCCOCCOCCOCCOCCO
Mol. weight [g/mol]:	334.49

Physical Properties

Property code	Value	Unit	Source
gf	-456.14	kJ/mol	Joback Method
hf	-1095.96	kJ/mol	Joback Method
hfus	51.22	kJ/mol	Joback Method
hvap	81.98	kJ/mol	Joback Method
log10ws	-2.97		Crippen Method
logp	3.186		Crippen Method
mvol	293.830	ml/mol	McGowan Method
pc	1171.22	kPa	Joback Method
rinpol	2442.00		NIST Webbook
rinpol	2442.00		NIST Webbook
tb	793.10	K	Joback Method
tc	971.02	K	Joback Method
tf	442.36	K	Joback Method
vc	1.135	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	935.53	J/mol×K	793.10	Joback Method
cpg	953.53	J/mol×K	822.75	Joback Method
cpg	970.55	J/mol×K	852.41	Joback Method
cpg	986.58	J/mol×K	882.06	Joback Method
cpg	1001.64	J/mol×K	911.71	Joback Method
cpg	1015.71	J/mol×K	941.36	Joback Method
cpg	1028.80	J/mol×K	971.02	Joback Method

dvisc	0.0005168	Paxs	442.36	Joback Method
dvisc	0.0001700	Paxs	500.82	Joback Method
dvisc	0.0000706	Paxs	559.27	Joback Method
dvisc	0.0000346	Paxs	617.73	Joback Method
dvisc	0.0000192	Paxs	676.19	Joback Method
dvisc	0.0000117	Paxs	734.64	Joback Method
dvisc	0.0000077	Paxs	793.10	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=R184208&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

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