

2-[2-(2-Pentoxyethoxy)ethoxy]ethanol

Other names:	Triethylene glycol, pentyl ether ethanol, 2-[2-(pentyloxy)ethoxy]ethoxy]- triethylene glycol monoamyl ether triethylene glycol monopentyl ether
Inchi:	InChI=1S/C11H24O4/c1-2-3-4-6-13-8-10-15-11-9-14-7-5-12/h12H,2-11H2,1H3
InchiKey:	PLLUGRGSPQYBKB-UHFFFAOYSA-N
Formula:	C11H24O4
SMILES:	CCCCCOCCOCOCOCOC
Mol. weight [g/mol]:	220.31

Physical Properties

Property code	Value	Unit	Source
gf	-410.08	kJ/mol	Joback Method
hf	-819.26	kJ/mol	Joback Method
hfus	31.90	kJ/mol	Joback Method
hvap	63.99	kJ/mol	Joback Method
log10ws	-0.95		Crippen Method
logp	1.219		Crippen Method
mcvol	189.330	ml/mol	McGowan Method
pc	2005.50	kPa	Joback Method
rinpol	1653.70		NIST Webbook
rinpol	1653.70		NIST Webbook
tb	610.52	K	Joback Method
tc	770.07	K	Joback Method
tf	341.24	K	Joback Method
vc	0.725	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	510.68	J/mol×K	610.52	Joback Method
cpg	537.49	J/mol×K	663.70	Joback Method
cpg	550.18	J/mol×K	690.29	Joback Method
cpg	585.29	J/mol×K	770.07	Joback Method

cpg	562.37	J/mol×K	716.89	Joback Method
cpg	574.08	J/mol×K	743.48	Joback Method
cpg	524.33	J/mol×K	637.11	Joback Method
cpl	489.08	J/mol×K	318.15	Heat capacity and phase behaviour of aqueous solutions of triethylene glycol monopentyl ether. Two point scaling analysis
cpl	497.05	J/mol×K	333.15	Heat capacity and phase behaviour of aqueous solutions of triethylene glycol monopentyl ether. Two point scaling analysis
cpl	484.23	J/mol×K	308.15	Heat capacity and phase behaviour of aqueous solutions of triethylene glycol monopentyl ether. Two point scaling analysis
cpl	479.72	J/mol×K	298.15	Heat capacity and phase behaviour of aqueous solutions of triethylene glycol monopentyl ether. Two point scaling analysis
cpl	477.67	J/mol×K	293.15	Heat capacity and phase behaviour of aqueous solutions of triethylene glycol monopentyl ether. Two point scaling analysis
cpl	475.62	J/mol×K	288.15	Heat capacity and phase behaviour of aqueous solutions of triethylene glycol monopentyl ether. Two point scaling analysis

cpl	473.61	J/mol×K	283.15	Heat capacity and phase behaviour of aqueous solutions of triethylene glycol monopentyl ether. Two point scaling analysis
cpl	494.37	J/mol×K	328.15	Heat capacity and phase behaviour of aqueous solutions of triethylene glycol monopentyl ether. Two point scaling analysis
cpl	471.70	J/mol×K	278.15	Heat capacity and phase behaviour of aqueous solutions of triethylene glycol monopentyl ether. Two point scaling analysis
dvisc	0.0000407	Paxs	610.52	Joback Method
dvisc	0.0000636	Paxs	565.64	Joback Method
dvisc	0.0001072	Paxs	520.76	Joback Method
dvisc	0.0001997	Paxs	475.88	Joback Method
dvisc	0.0010676	Paxs	386.12	Joback Method
dvisc	0.0034363	Paxs	341.24	Joback Method
dvisc	0.0004231	Paxs	431.00	Joback Method

Sources

Crippen Method:

https://www.chemeo.com/doc/models/crippen_log10ws

Heat capacity and phase behaviour of aqueous solutions of triethylene glycol monopentyl ether. Two point scaling analysis:

<https://www.doi.org/10.1016/j.fluid.2016.10.005>

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=R188606&Units=SI>

Crippen Method:

<http://pubs.acs.org/doi/abs/10.1021/ci990307l>

Legend

cpg:

Ideal gas heat capacity

cpl:	Liquid phase 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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