Ethanol, 2-[2-(2-butoxyethoxy)ethoxy]-

Other names:	2-(2-(2-butoxyethoxy)ethoxy)ethanol
	2-[2-(2-Butoxyethoxy)ethoxy]ethanol
	3,6,9-Trioxa-1-tridecanol
	3,6,9-Trioxatridecan-1-ol
	3,6,9-trioxatridecane-1-ol
	Dowanol TBAT
	NSC 164915
	Poly-solv TB
	Triethylene glycol butyl ether
	Triethylene glycol mono-n-butyl ether
	Triethylene glycol n-butyl ether
	butoxytriethylene glycol
	butoxytriglycol
	triethylene glycol butyl ester
	triethylene glycol monobutyl ether
	triglycol monobutyl ether
Inchi:	InChI=1S/C10H22O4/c1-2-3-5-12-7-9-14-10-8-13-6-4-11/h11H,2-10H2,1H3
InchiKey:	COBPKKZHLDDMTB-UHFFFAOYSA-N
Formula:	C10H22O4
SMILES:	CCCCOCCOCCOCCO
Mol. weight [g/mol]:	206.28
CAS:	143-22-6

Physical Properties

Property code	Value	Unit	Source
gf	-418.50	kJ/mol	Joback Method
hf	-798.62	kJ/mol	Joback Method
hfus	29.31	kJ/mol	Joback Method
hvap	61.76	kJ/mol	Joback Method
log10ws	-0.53		Crippen Method
logp	0.829		Crippen Method
mcvol	175.240	ml/mol	McGowan Method
pc	2189.73	kPa	Joback Method
rinpol	1479.00		NIST Webbook
rinpol	1464.00		NIST Webbook
rinpol	1475.60		NIST Webbook
tb	587.64	K	Joback Method

tc	747.06	K	Joback Method
tf	225.55	K	NIST Webbook
vc	0.668	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	530.95	J/mol×K	747.06	Joback Method
cpg	472.93	J/mol×K	614.21	Joback Method
cpg	485.41	J/mol×K	640.78	Joback Method
cpg	497.46	J/mol×K	667.35	Joback Method
cpg	509.07	J/mol×K	693.92	Joback Method
cpg	520.24	J/mol×K	720.49	Joback Method
cpg	460.02	J/mol×K	587.64	Joback Method
dvisc	0.0092820	Pa×s	293.15	Density and Viscosity of the Binary Mixture of Triethylene Glycol Monobutyl Ether + Water from (293.15 to 333.15) K at Atmospheric Pressure
dvisc	0.0065280	Pa×s	303.15	Density and Viscosity of the Binary Mixture of Triethylene Glycol Monobutyl Ether + Water from (293.15 to 333.15) K at Atmospheric Pressure
dvisc	0.0049790	Pa×s	313.15	Density and Viscosity of the Binary Mixture of Triethylene Glycol Monobutyl Ether + Water from (293.15 to 333.15) K at Atmospheric Pressure

dvisc	0.0037690	Pa×s	323.15	Density and Viscosity of the Binary Mixture of Triethylene Glycol Monobutyl Ether + Water from (293.15 to 333.15) K at Atmospheric Pressure
dvisc	0.0029780	Pa×s	333.15	Density and Viscosity of the Binary Mixture of Triethylene Glycol Monobutyl Ether + Water from (293.15 to 333.15) K at Atmospheric Pressure
rfi	1.43973		298.15	Excess molar volumes and excess molar enthalpies of the binary mixtures of 1,2-dichloropropane with di- and triethylene glycol mono-alkyl ethers at T=298.15K

Sources

Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Joback Method:	https://en.wikipedia.org/wiki/Joback_method
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C143226&Units=SI
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Solubility Measurement and Thermodynamic Properties Calculation for Several CO2 + Ether Absorbent Systems:	https://www.doi.org/10.1021/acs.jced.8b00936
Density and Viscosity of the Binary Mixture of Triethylene Glycol Monobutyl Ether + Water from (293.15 to 333.15) K at Atmospheric Pressure:	https://www.doi.org/10.1021/je900510x
Solubility Study of Methane and Ethane in Promising Physical Solvents for Natural Gas Sweetening Operations:	https://www.doi.org/10.1021/je050172h
Excess molar volumes and excess molar enthalpies of the binary mixtures of 1,2-dichloropropane with di- and triethylene glycol mono-alkyl ethers at T=298.15K:	https://www.doi.org/10.1016/j.fluid.2009.06.018
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
rfi:	Refractive Index
rinpol:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume