Ethanol, 2-[(2-ethylhexyl)oxy]-

Other names: 2-(2-Ethylhexyloxy)ethanol
Ethylene glycol mono(2-ethylhexyl) ether
Inchi: InChI=1S/C10H22O2/c1-3-5-6-10(4-2)9-12-8-7-11/h10-11H,3-9H2,1-2H3
InchiKey: OHJYHAOODFPJOD-UHFFFAOYSA-N
Formula: C10H22O2
SMILES: CCCCC(CC)COCCO
Mol. weight [g/mol]: 174.28
CAS: 1559-35-9

Physical Properties

Property code	Value	Unit	Source
gf	-210.94	kJ/mol	Joback Method
hf	-539.46	kJ/mol	Joback Method
hfus	23.41	kJ/mol	Joback Method
hvap	56.55	kJ/mol	Joback Method
log10ws	-2.12		Crippen Method
logp	2.212		Crippen Method
mcvol	163.500	ml/mol	McGowan Method
pc	2278.41	kPa	Joback Method
tb	542.36	K	Joback Method
tc	703.71	K	Joback Method
tf	270.51	K	Joback Method
vc	0.626	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	407.28	J/mol×K	542.36	Joback Method
cpg	420.62	J/mol×K	569.25	Joback Method
cpg	433.48	J/mol×K	596.14	Joback Method
cpg	445.85	J/mol×K	623.04	Joback Method
cpg	457.75	J/mol×K	649.93	Joback Method
cpg	469.19	J/mol×K	676.82	Joback Method
cpg	480.17	J/mol×K	703.71	Joback Method

dvisc	0.0286706	Pa×s	270.51	Joback Method
dvisc	0.0054471	Pa×s	315.82	Joback Method
dvisc	0.0015699	Pa×s	361.13	Joback Method
dvisc	0.0005971	Pa×s	406.44	Joback Method
dvisc	0.0002757	Pa×s	451.74	Joback Method
dvisc	0.0001466	Pa×s	497.05	Joback Method
dvisc	0.0000866	Pa×s	542.36	Joback Method
hvapt	56.50	kJ/mol	441.50	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.51205e+01
Coeff. B	-4.54702e+03
Coeff. C	-8.04700e+01
Temperature range (K), min.	387.02
Temperature range (K), max.	544.03

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C1559359&Units=SI

The Yaws Handbook of Vapor Pressure: https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure

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
hvapt:	Enthalpy of vaporization at a given temperature
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
pc:	Critical Pressure
pvap:	Vapor pressure
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume