

Ethoxyacetaldehyde diethylacetal

Other names:	1,1,2-Triethoxyethane Ethane, 1,1,2-triethoxy-
Inchi:	InChI=1S/C8H18O3/c1-4-9-7-8(10-5-2)11-6-3/h8H,4-7H2,1-3H3
InchiKey:	VNSJUZIHZNZLKM-UHFFFAOYSA-N
Formula:	C8H18O3
SMILES:	CCOCC(OCC)OCC
Mol. weight [g/mol]:	162.23
CAS:	4819-77-6

Physical Properties

Property code	Value	Unit	Source
gf	-300.96	kJ/mol	Joback Method
hf	-610.39	kJ/mol	Joback Method
hfus	16.52	kJ/mol	Joback Method
hvap	40.24	kJ/mol	Joback Method
log10ws	-1.04		Crippen Method
logp	1.422		Crippen Method
mvol	141.190	ml/mol	McGowan Method
pc	2429.05	kPa	Joback Method
tb	449.26	K	Joback Method
tc	617.01	K	Joback Method
tf	231.61	K	Joback Method
vc	0.531	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	307.27	J/mol×K	449.26	Joback Method
cpg	319.92	J/mol×K	477.22	Joback Method
cpg	332.26	J/mol×K	505.18	Joback Method
cpg	344.29	J/mol×K	533.14	Joback Method
cpg	355.98	J/mol×K	561.09	Joback Method
cpg	367.33	J/mol×K	589.05	Joback Method
cpg	378.33	J/mol×K	617.01	Joback Method

dvisc	0.0033474	Paxs	231.61	Joback Method
dvisc	0.0014191	Paxs	267.88	Joback Method
dvisc	0.0007383	Paxs	304.16	Joback Method
dvisc	0.0004415	Paxs	340.44	Joback Method
dvisc	0.0002915	Paxs	376.71	Joback Method
dvisc	0.0002070	Paxs	412.99	Joback Method
dvisc	0.0001554	Paxs	449.26	Joback Method

Sources

McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C4819776&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

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
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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