Undecane, 1,1-diethoxy

Other names: 1,1-diethoxyundecane
Inchi: InChI=1S/C15H32O2/c1-4-7-8-9-10-11-12-13-14-15(16-5-2)17-6-3/h15H,4-14H2,1-3H3
InchiKey: ZQNOIYUMSNPIGA-UHFFFAOYSA-N
Formula: C15H32O2
SMILES: CCCCCCCCCCC(OCC)OCC
Mol. weight [g/mol]: 244.41
CAS: 53405-97-3

Physical Properties

Property code	Value	Unit	Source
gf	-137.02	kJ/mol	Joback Method
hf	-622.65	kJ/mol	Joback Method
hfus	33.46	kJ/mol	Joback Method
hvap	53.42	kJ/mol	Joback Method
log10ws	-4.88		Crippen Method
logp	4.916		Crippen Method
mcvol	233.950	ml/mol	McGowan Method
pc	1388.15	kPa	Joback Method
rinpol	1572.00		NIST Webbook
ripol	1712.00		NIST Webbook
ripol	1726.00		NIST Webbook
tb	587.00	K	Joback Method
tc	749.13	K	Joback Method
tf	288.27	K	Joback Method
vc	0.905	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	620.57	J/mol×K	587.00	Joback Method
cpg	705.89	J/mol×K	722.11	Joback Method
cpg	690.17	J/mol×K	695.09	Joback Method
cpg	673.78	J/mol×K	668.07	Joback Method
cpg	656.72	J/mol×K	641.04	Joback Method

cpg	638.99	J/mol×K	614.02	Joback Method
cpg	720.96	J/mol×K	749.13	Joback Method
dvisc	0.0000992	Pa×s	587.00	Joback Method
dvisc	0.0001361	Pa×s	537.21	Joback Method
dvisc	0.0001992	Pa×s	487.42	Joback Method
dvisc	0.0003181	Pa×s	437.63	Joback Method
dvisc	0.0005728	Pa×s	387.85	Joback Method
dvisc	0.0012264	Pa×s	338.06	Joback Method
dvisc	0.0034157	Pa×s	288.27	Joback Method

Sources

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
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C53405973&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l

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