Heptane, 1-ethoxy-

Other names: Ether, ethyl heptyl
Ethyl heptyl ether
Inchi: InChI=1S/C9H20O/c1-3-5-6-7-8-9-10-4-2/h3-9H2,1-2H3
InchiKey: UTBWZYCUAYXAKT-UHFFFAOYSA-N
Formula: C9H20O
SMILES: CCCCCCCOCC
Mol. weight [g/mol]: 144.25
CAS: 1969-43-3

Physical Properties

Property code	Value	Unit	Source
gf	-80.10	kJ/mol	Joback Method
hf	-361.31	kJ/mol	Joback Method
hfus	20.25	kJ/mol	Joback Method
hvap	38.04	kJ/mol	Joback Method
log10ws	-2.68		Crippen Method
logp	2.993		Crippen Method
mcvol	143.540	ml/mol	McGowan Method
pc	2269.73	kPa	Joback Method
tb	427.74	K	Joback Method
tc	591.08	K	Joback Method
tf	204.85 ± 0.40	K	NIST Webbook
vc	0.557	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	298.84	J/mol×K	427.74	Joback Method
cpg	312.62	J/mol×K	454.96	Joback Method
cpg	325.97	J/mol×K	482.19	Joback Method
cpg	338.88	J/mol×K	509.41	Joback Method
cpg	351.35	J/mol×K	536.63	Joback Method
cpg	363.40	J/mol×K	563.86	Joback Method
cpg	375.02	J/mol×K	591.08	Joback Method

dvisc	0.0042964	Pa×s	213.42	Joback Method
dvisc	0.0018183	Pa×s	249.14	Joback Method
dvisc	0.0009547	Pa×s	284.86	Joback Method
dvisc	0.0005787	Pa×s	320.58	Joback Method
dvisc	0.0003878	Pa×s	356.30	Joback Method
dvisc	0.0002795	Pa×s	392.02	Joback Method
dvisc	0.0002128	Pa×s	427.74	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=C1969433&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
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume