Butane, 2-ethoxy-

Other names:	2-Ethoxybutane
	Ether, sec-butyl ethyl
	Ethyl sec-butyl ether
	sec-Butyl Ethyl ether
	sec-C4H9OC2H5
Inchi:	InChI=1S/C6H14O/c1-4-6(3)7-5-2/h6H,4-5H2,1-3H3
InchiKey:	VSCUCHUDCLERMY-UHFFFAOYSA-N
Formula:	C6H14O
SMILES:	CCOC(C)CC
Mol. weight [g/mol]:	102.17
CAS:	2679-87-0

Physical Properties

Property code	Value	Unit	Source
gf	-107.80	kJ/mol	Joback Method
hf	-304.67	kJ/mol	Joback Method
hfus	8.96	kJ/mol	Joback Method
hvap	34.20	kJ/mol	NIST Webbook
ie	9.32	eV	NIST Webbook
ie	9.20 ± 0.10	eV	NIST Webbook
log10ws	-1.53		Crippen Method
logp	1.821		Crippen Method
mcvol	101.270	ml/mol	McGowan Method
pc	3076.16	kPa	Joback Method
rinpol	622.00		NIST Webbook
rinpol	648.00		NIST Webbook
ripol	734.00		NIST Webbook
tb	348.50 ± 0.50	K	NIST Webbook
tb	354.40	K	NIST Webbook
tb	354.40 ± 0.50	K	NIST Webbook
tc	527.06	K	Joback Method
tf	164.61	K	Joback Method
vc	0.384	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	181.69	J/mol×K	358.66	Joback Method
cpg	192.17	J/mol×K	386.73	Joback Method
cpg	202.35	J/mol×K	414.79	Joback Method
cpg	212.24	J/mol×K	442.86	Joback Method
cpg	221.82	J/mol×K	470.92	Joback Method
cpg	231.12	J/mol×K	498.99	Joback Method
cpg	240.11	J/mol×K	527.06	Joback Method
dvisc	0.0064749	Pa×s	164.61	Joback Method
dvisc	0.0023051	Pa×s	196.95	Joback Method
dvisc	0.0010982	Pa×s	229.29	Joback Method
dvisc	0.0006285	Pa×s	261.63	Joback Method
dvisc	0.0004067	Pa×s	293.98	Joback Method
dvisc	0.0002868	Pa×s	326.32	Joback Method
dvisc	0.0002155	Pa×s	358.66	Joback Method
hvapt	30.38	kJ/mol	354.40	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.60936e+01
Coeff. B	-3.54404e+03
Coeff. C	-3.96590e+01
Temperature range (K), min.	263.88
Temperature range (K), max.	368.35

Sources

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=C2679870&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

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
ie:	Ionization energy
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
pc:	Critical Pressure
pvap:	Vapor 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