

Butane, 2-methoxy-

Other names:	2-METHOXYBUTANE Ether, sec-butyl methyl METHYL SEC-BUTYL ETHER SEC-BUTYL METHYL ETHER
Inchi:	InChI=1S/C5H12O/c1-4-5(2)6-3/h5H,4H2,1-3H3
InchiKey:	FVNIMHIOIXPIQT-UHFFFAOYSA-N
Formula:	C5H12O
SMILES:	CCC(C)OC
Mol. weight [g/mol]:	88.15
CAS:	6795-87-5

Physical Properties

Property code	Value	Unit	Source
gf	-116.22	kJ/mol	Joback Method
hf	-284.03	kJ/mol	Joback Method
hfus	6.37	kJ/mol	Joback Method
hvap	30.41	kJ/mol	NIST Webbook
ie	9.21 ± 0.07	eV	NIST Webbook
log10ws	-1.11		Crippen Method
logp	1.431		Crippen Method
mcvol	87.180	ml/mol	McGowan Method
pc	3431.89	kPa	Joback Method
tb	332.20	K	NIST Webbook
tb	334.00 ± 3.00	K	NIST Webbook
tc	504.03	K	Joback Method
tf	153.34	K	Joback Method
vc	0.328	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	198.08	J/mol×K	504.03	Joback Method
cpg	190.26	J/mol×K	475.99	Joback Method
cpg	182.20	J/mol×K	447.95	Joback Method

cpg	173.90	J/mol×K	419.91	Joback Method
cpg	165.37	J/mol×K	391.86	Joback Method
cpg	156.61	J/mol×K	363.82	Joback Method
cpg	147.62	J/mol×K	335.78	Joback Method
dvisc	0.0058560	Pa×s	153.34	Joback Method
dvisc	0.0002086	Pa×s	335.78	Joback Method
dvisc	0.0002758	Pa×s	305.37	Joback Method
dvisc	0.0003877	Pa×s	274.97	Joback Method
dvisc	0.0005934	Pa×s	244.56	Joback Method
dvisc	0.0010248	Pa×s	214.15	Joback Method
dvisc	0.0021208	Pa×s	183.75	Joback Method
hvapt	28.09	kJ/mol	332.20	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.53160e+01
Coeff. B	-3.19552e+03
Coeff. C	-3.34880e+01
Temperature range (K), min.	246.12
Temperature range (K), max.	352.90

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/T + C \cdot \ln(T) + D \cdot T^2$
Coeff. A	5.98518e+01
Coeff. B	-5.57636e+03
Coeff. C	-6.71233e+00
Coeff. D	4.62607e-06
Temperature range (K), min.	150.00
Temperature range (K), max.	498.00

Sources

NIST Webbook:

<http://webbook.nist.gov/cgi/cbook.cgi?ID=C6795875&Units=SI>

The Yaws Handbook of Vapor Pressure:
KDB Vapor Pressure Data:

<https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure>

Crippen Method:

<https://www.cheric.org/research/kdb/hcprop/showprop.php?cmpid=1007>

Crippen Method:

<http://pubs.acs.org/doi/abs/10.1021/ci990307l>

Joback Method:

https://www.chemeo.com/doc/models/crippen_log10ws

KDB:

https://en.wikipedia.org/wiki/Joback_method

McGowan Method:

<https://www.cheric.org/research/kdb/hcprop/showprop.php?cmpid=1007>

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

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