2-Buten-1-ol, (E)-

Other names:	(E)-2-Buten-1-ol
	2-(E)-Buten-1-ol
	trans-2-Buten-1-Ol
	trans-2-Butenol
	trans-2-Butenyl alcohol
	trans-Crotonyl Alcohol
	trans-Crotyl Alcohol
Inchi:	InChI=1S/C4H8O/c1-2-3-4-5/h2-3,5H,4H2,1H3/b3-2+
InchiKey:	WCASXYBKJHWFMY-NSCUHMNNSA-N
Formula:	C4H8O
SMILES:	CC=CCO
Mol. weight [g/mol]:	72.11
CAS:	504-61-0

Physical Properties

Property code	Value	Unit	Source
gf	-73.80	kJ/mol	Joback Method
hf	-160.90	kJ/mol	Joback Method
hfus	10.41	kJ/mol	Joback Method
hvap	41.14	kJ/mol	Joback Method
ie	9.15	eV	NIST Webbook
log10ws	-0.61		Crippen Method
logp	0.555		Crippen Method
mcvol	68.790	ml/mol	McGowan Method
pc	4704.19	kPa	Joback Method
rinpol	654.00		NIST Webbook
ripol	1215.00		NIST Webbook
ripol	1215.00		NIST Webbook
tb	394.40	K	NIST Webbook
tc	557.54	K	Joback Method
tf	190.58	K	Joback Method
vc	0.259	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	119.16	J/mol×K	387.26	Joback Method
cpg	125.85	J/mol×K	415.64	Joback Method
cpg	132.23	J/mol×K	444.02	Joback Method
cpg	138.32	J/mol×K	472.40	Joback Method
cpg	144.13	J/mol×K	500.78	Joback Method
cpg	149.66	J/mol×K	529.16	Joback Method
cpg	154.94	J/mol×K	557.54	Joback Method
dvisc	0.1526839	Pa×s	190.58	Joback Method
dvisc	0.0243706	Pa×s	223.36	Joback Method
dvisc	0.0062218	Pa×s	256.14	Joback Method
dvisc	0.0021653	Pa×s	288.92	Joback Method
dvisc	0.0009344	Pa×s	321.70	Joback Method
dvisc	0.0004710	Pa×s	354.48	Joback Method
dvisc	0.0002666	Pa×s	387.26	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.58988e+01
Coeff. B	-3.87619e+03
Coeff. C	-5.07790e+01
Temperature range (K), min.	299.08
Temperature range (K), max.	416.90

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=C504610&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

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
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