2-Penten-1-ol, (Z)-

Other names:	(2Z)-2-Penten-1-ol
	(Z)-2-Penten-1-ol
	(Z)-2-Pentenol
	(Z)-Pent-2-en-1-ol
	(Z)-Pent-2-enol
	2-(Z)-pentenol
	Pent-2(Z)-enol
	cis-2-Penten-1-ol
	cis-2-Pentenol
	cis-Pent-2-en-1-ol
	cis-pent-2-ene-1-ol
Inchi:	InChI=1S/C5H10O/c1-2-3-4-5-6/h3-4,6H,2,5H2,1H3/b4-3-
InchiKey:	BTSIZIIPFNVMHF-ARJAWSKDSA-N
Formula:	C5H10O
SMILES:	CCC=CCO
Mol. weight [g/mol]:	86.13
CAS:	1576-95-0

Physical Properties

Property code	Value	Unit	Source
gf	-65.38	kJ/mol	Joback Method
hf	-181.54	kJ/mol	Joback Method
hfus	13.00	kJ/mol	Joback Method
hvap	43.36	kJ/mol	Joback Method
log10ws	-1.03		Crippen Method
logp	0.945		Crippen Method
mcvol	82.880	ml/mol	McGowan Method
pc	4140.93	kPa	Joback Method
rinpol	780.50		NIST Webbook
rinpol	765.00		NIST Webbook
rinpol	748.00		NIST Webbook
rinpol	767.00		NIST Webbook
rinpol	767.00		NIST Webbook
rinpol	767.00		NIST Webbook
rinpol	768.00		NIST Webbook
rinpol	767.00		NIST Webbook
rinpol	767.00		NIST Webbook

rinpol	763.00	NIST Webbook
rinpol	753.00	NIST Webbook
rinpol	750.00	NIST Webbook
rinpol	746.00	NIST Webbook
rinpol	746.00	NIST Webbook
rinpol	749.00	NIST Webbook
rinpol	749.00	NIST Webbook
rinpol	740.00	NIST Webbook
rinpol	748.00	NIST Webbook
rinpol	747.00	NIST Webbook
rinpol	782.70	NIST Webbook
rinpol	771.00	NIST Webbook
rinpol	768.00	NIST Webbook
rinpol	774.00	NIST Webbook
rinpol	765.00	NIST Webbook
rinpol	767.00	NIST Webbook
rinpol	780.50	NIST Webbook
rinpol	760.00	NIST Webbook
rinpol	760.00	NIST Webbook
rinpol	734.00	NIST Webbook
rinpol	736.00	NIST Webbook
rinpol	767.00	NIST Webbook
rinpol	769.00	NIST Webbook
rinpol	740.00	NIST Webbook
rinpol	751.00	NIST Webbook
rinpol	767.00	NIST Webbook
rinpol	746.00	NIST Webbook
rinpol	769.00	NIST Webbook
rinpol	769.00	NIST Webbook
rinpol	768.00	NIST Webbook
rinpol	743.00	NIST Webbook
rinpol	750.00	NIST Webbook
rinpol	764.00	NIST Webbook
rinpol	744.00	NIST Webbook
rinpol	780.00	NIST Webbook
ripol	1296.00	NIST Webbook
ripol	1312.00	NIST Webbook
ripol	1323.00	NIST Webbook
ripol	1296.00	NIST Webbook
ripol	1308.00	NIST Webbook
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ripol	1318.00	NIST Webbook
ripol	1296.00	NIST Webbook
ripol	1296.00	NIST Webbook

ripol	1321.00	NIST Webbook
ripol	1314.00	NIST Webbook
ripol	1323.00	NIST Webbook
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ripol	1302.00	NIST Webbook
ripol	1310.00	NIST Webbook

ripol	1314.00		NIST Webbook
ripol	1334.00		NIST Webbook
ripol	1310.00		NIST Webbook
ripol	1321.00		NIST Webbook
ripol	1311.00		NIST Webbook
ripol	1304.00		NIST Webbook
ripol	1288.00		NIST Webbook
ripol	1325.00		NIST Webbook
ripol	1325.00		NIST Webbook
ripol	1317.00		NIST Webbook
ripol	1322.00		NIST Webbook
ripol	1305.00		NIST Webbook
ripol	1327.00		NIST Webbook
ripol	1313.00		NIST Webbook
tb	411.20	K	NIST Webbook
tc	579.75	K	Joback Method
tf	201.85	K	Joback Method
vc	0.315	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	154.30	J/mol×K	410.14	Joback Method
cpg	162.28	J/mol×K	438.41	Joback Method
cpg	169.90	J/mol×K	466.68	Joback Method
cpg	177.18	J/mol×K	494.94	Joback Method
cpg	184.13	J/mol×K	523.21	Joback Method
cpg	190.77	J/mol×K	551.48	Joback Method
cpg	197.11	J/mol×K	579.75	Joback Method
dvisc	0.1185690	Pa×s	201.85	Joback Method
dvisc	0.0195828	Pa×s	236.56	Joback Method
dvisc	0.0051279	Pa×s	271.28	Joback Method
dvisc	0.0018199	Pa×s	306.00	Joback Method
dvisc	0.0007977	Pa×s	340.71	Joback Method
dvisc	0.0004073	Pa×s	375.42	Joback Method
dvisc	0.0002330	Pa×s	410.14	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.58997e+01
Coeff. B	-4.01335e+03
Coeff. C	-5.54500e+01
Temperature range (K), min.	312.52
Temperature range (K), max.	434.49

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=C1576950&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
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