2-Penten-1-ol

Other names: 2-pentenol
pent-2-en-1-ol
Inchi: InChI=1S/C5H10O/c1-2-3-4-5-6/h3-4,6H,2,5H2,1H3/b4-3+
InchiKey: BTSIZIIPFNVMHF-ONEGZZNKSA-N
Formula: C5H10O
SMILES: CCC=CCO
Mol. weight [g/mol]: 86.13
CAS: 20273-24-9

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	757.40		NIST Webbook
rinpol	767.00		NIST Webbook
rinpol	766.00		NIST Webbook
rinpol	746.00		NIST Webbook
rinpol	769.00		NIST Webbook
rinpol	744.00		NIST Webbook
rinpol	743.00		NIST Webbook
rinpol	751.00		NIST Webbook
rinpol	751.00		NIST Webbook
rinpol	738.00		NIST Webbook
rinpol	781.00		NIST Webbook
rinpol	773.00		NIST Webbook
rinpol	757.40		NIST Webbook
rinpol	781.00		NIST Webbook
rinpol	767.00		NIST Webbook
ripol	1315.00		NIST Webbook
ripol	1324.00		NIST Webbook
ripol	1268.00		NIST Webbook

ripol	1324.00		NIST Webbook
ripol	1318.00		NIST Webbook
ripol	1361.00		NIST Webbook
ripol	1361.00		NIST Webbook
ripol	1321.00		NIST Webbook
ripol	1321.00		NIST Webbook
ripol	1306.00		NIST Webbook
tb	410.14	K	Joback Method
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	190.77	J/mol×K	551.48	Joback Method
cpg	184.13	J/mol×K	523.21	Joback Method
cpg	177.18	J/mol×K	494.94	Joback Method
cpg	169.90	J/mol×K	466.68	Joback Method
cpg	162.28	J/mol×K	438.41	Joback Method
cpg	197.11	J/mol×K	579.75	Joback Method
dvisc	0.0002330	Pa×s	410.14	Joback Method
dvisc	0.0004073	Pa×s	375.42	Joback Method
dvisc	0.0007977	Pa×s	340.71	Joback Method
dvisc	0.0018199	Pa×s	306.00	Joback Method
dvisc	0.0051279	Pa×s	271.28	Joback Method
dvisc	0.0195828	Pa×s	236.56	Joback Method
dvisc	0.1185690	Pa×s	201.85	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.78822e+01
Coeff. B	-4.53009e+03
Coeff. C	-5.54500e+01

Temperature range (K), min.	312.92
Temperature range (K), max.	415.82

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=C20273249&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