

3-Penten-1-ol

Other names:	3-Pentenol Pent-3-en-1-ol
Inchi:	InChI=1S/C5H10O/c1-2-3-4-5-6/h2-3,6H,4-5H2,1H3
InchiKey:	FSUXYWPIJZGCC-UHFFFAOYSA-N
Formula:	C5H10O
SMILES:	CC=CCCO
Mol. weight [g/mol]:	86.13
CAS:	39161-19-8

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
mvol	82.880	ml/mol	McGowan Method
pc	4140.93	kPa	Joback Method
rinpol	717.00		NIST Webbook
rinpol	735.00		NIST Webbook
rinpol	717.00		NIST Webbook
rinpol	735.00		NIST Webbook
rinpol	725.00		NIST Webbook
tb	410.14	K	Joback Method
tc	579.75	K	Joback Method
tf	201.85	K	Joback Method
vc	0.315	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	154.30	J/molxK	410.14	Joback Method
cpg	162.28	J/molxK	438.41	Joback Method

cpg	169.90	J/molxK	466.68	Joback Method
cpg	177.18	J/molxK	494.94	Joback Method
cpg	184.13	J/molxK	523.21	Joback Method
cpg	190.77	J/molxK	551.48	Joback Method
cpg	197.11	J/molxK	579.75	Joback Method
dvisc	0.1185690	Paxs	201.85	Joback Method
dvisc	0.0195828	Paxs	236.56	Joback Method
dvisc	0.0051279	Paxs	271.28	Joback Method
dvisc	0.0018199	Paxs	306.00	Joback Method
dvisc	0.0007977	Paxs	340.71	Joback Method
dvisc	0.0004073	Paxs	375.42	Joback Method
dvisc	0.0002330	Paxs	410.14	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.75083e+01
Coeff. B	-4.41135e+03
Coeff. C	-5.47550e+01
Temperature range (K), min.	310.92
Temperature range (K), max.	416.43

Sources

Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci9903071
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=C39161198&Units=SI
The Yaws Handbook of Vapor Pressure:	https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure

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
rinpola:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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