Benzene, 4-pentenyl-

Other names:	1-Pentene, 5-phenyl-
	1-Phenyl-4-pentene
	4-Pentenylbenzene
	5-Phenyl-1-pentene
Inchi:	InChI=1S/C11H14/c1-2-3-5-8-11-9-6-4-7-10-11/h2,4,6-7,9-10H,1,3,5,8H2
InchiKey:	RURREWSZSUQSNB-UHFFFAOYSA-N
Formula:	C11H14
SMILES:	C=CCCCc1ccccc1
Mol. weight [g/mol]:	146.23
CAS:	1075-74-7

Physical Properties

Property code	Value	Unit	Source
gf	241.99	kJ/mol	Joback Method
hf	91.59	kJ/mol	Joback Method
hfus	17.01	kJ/mol	Joback Method
hvap	41.69	kJ/mol	Joback Method
log10ws	-3.38		Crippen Method
logp	3.195		Crippen Method
mcvol	137.790	ml/mol	McGowan Method
pc	2767.17	kPa	Joback Method
rinpol	1140.00		NIST Webbook
rinpol	1140.00		NIST Webbook
tb	471.15 ± 2.00	K	NIST Webbook
tc	680.80	K	Joback Method
tf	238.39	K	Joback Method
vc	0.524	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	282.51	J/mol×K	474.44	Joback Method
cpg	351.24	J/mol×K	646.41	Joback Method
cpg	339.13	J/mol×K	612.02	Joback Method

cpg	326.25	J/mol×K	577.62	Joback Method
cpg	312.54	J/mol×K	543.23	Joback Method
cpg	297.98	J/mol×K	508.83	Joback Method
cpg	362.60	J/mol×K	680.80	Joback Method
dvisc	0.0002199	Pa×s	474.44	Joback Method
dvisc	0.0002825	Pa×s	435.10	Joback Method
dvisc	0.0003815	Pa×s	395.76	Joback Method
dvisc	0.0005504	Pa×s	356.41	Joback Method
dvisc	0.0008698	Pa×s	317.07	Joback Method
dvisc	0.0015649	Pa×s	277.73	Joback Method
dvisc	0.0034173	Pa×s	238.39	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.46783e+01
Coeff. B	-4.00574e+03
Coeff. C	-7.29640e+01
Temperature range (K), min.	351.32
Temperature range (K), max.	500.62

Sources

McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C1075747&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
Joback Method:	https://en.wikipedia.org/wiki/Joback_method

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

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