Benzene, 1-pentenyl-

Other names:	1-Pentene, 1-phenyl-
	1-Pentenylbenzene
	1-Phenyl-1-pentene
	1-Phenylpentene
Inchi:	InChI=1S/C11H14/c1-2-3-5-8-11-9-6-4-7-10-11/h4-10H,2-3H2,1H3
InchiKey:	KHMYONNPZWOTKW-UHFFFAOYSA-N
Formula:	C11H14
SMILES:	CCCC=Cc1ccccc1
Mol. weight [g/mol]:	146.23
CAS:	826-18-6

Physical Properties

Property code	Value	Unit	Source
gf	234.37	kJ/mol	Joback Method
hf	83.38	kJ/mol	Joback Method
hfus	18.49	kJ/mol	Joback Method
hvap	42.31	kJ/mol	Joback Method
ie	8.40 ± 0.07	eV	NIST Webbook
log10ws	-3.55		Crippen Method
logp	3.500		Crippen Method
mcvol	137.790	ml/mol	McGowan Method
pc	2796.51	kPa	Joback Method
rinpol	1131.40		NIST Webbook
tb	450.00 ± 3.00	K	NIST Webbook
tc	693.75	K	Joback Method
tf	235.07	K	Joback Method
vc	0.523	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	283.26	J/mol×K	481.92	Joback Method
cpg	298.98	J/mol×K	517.23	Joback Method
cpg	313.72	J/mol×K	552.53	Joback Method

cpg	327.54	J/mol×K	587.84	Joback Method
cpg	340.49	J/mol×K	623.14	Joback Method
cpg	352.62	J/mol×K	658.45	Joback Method
cpg	363.97	J/mol×K	693.75	Joback Method
dvisc	0.0035249	Pa×s	235.07	Joback Method
dvisc	0.0014929	Pa×s	276.21	Joback Method
dvisc	0.0007901	Pa×s	317.35	Joback Method
dvisc	0.0004839	Pa×s	358.50	Joback Method
dvisc	0.0003278	Pa×s	399.64	Joback Method
dvisc	0.0002388	Pa×s	440.78	Joback Method
dvisc	0.0001837	Pa×s	481.92	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.90764e+01
Coeff. B	-5.38690e+03
Coeff. C	-7.74120e+01
Temperature range (K), min.	364.12
Temperature range (K), max.	468.76

Sources

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
McGowan Method: http://link.springer.com/article/10.1007/BF02311772
NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C826186&Units=SI

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