Benzene, cyclopentyl-

Other names:	Cyclopentane, phenyl-
	Cyclopentylbenzene
	Phenylcyclopentane
Inchi:	InChI=1S/C11H14/c1-2-6-10(7-3-1)11-8-4-5-9-11/h1-3,6-7,11H,4-5,8-9H2
InchiKey:	VDIHFNQRHGYISG-UHFFFAOYSA-N
Formula:	C11H14
SMILES:	c1ccc(C2CCCC2)cc1
Mol. weight [g/mol]:	146.23
CAS:	700-88-9

Physical Properties

Property code	Value	Unit	Source
gf	190.70	kJ/mol	Joback Method
hf	26.64	kJ/mol	Joback Method
hfus	12.22	kJ/mol	Joback Method
hvap	42.61	kJ/mol	Joback Method
ie	7.90	eV	NIST Webbook
ie	8.81	eV	NIST Webbook
log10ws	-3.39		Crippen Method
logp	3.344		Crippen Method
mcvol	131.230	ml/mol	McGowan Method
pc	3217.33	kPa	Joback Method
rinpol	1196.00		NIST Webbook
rinpol	1221.00		NIST Webbook
rinpol	1212.00		NIST Webbook
rinpol	1244.00		NIST Webbook
rinpol	1196.00		NIST Webbook
rinpol	1244.00		NIST Webbook
tb	490.90 ± 3.00	K	NIST Webbook
tc	729.15	K	Joback Method
tf	251.05	K	Joback Method
vc	0.484	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	285.54	J/mol×K	493.04	Joback Method
cpg	305.04	J/mol×K	532.39	Joback Method
cpg	323.18	J/mol×K	571.74	Joback Method
cpg	340.03	J/mol×K	611.10	Joback Method
cpg	355.66	J/mol×K	650.45	Joback Method
cpg	370.13	J/mol×K	689.80	Joback Method
cpg	383.52	J/mol×K	729.15	Joback Method
dvisc	0.0036417	Pa×s	251.05	Joback Method
dvisc	0.0017877	Pa×s	291.38	Joback Method
dvisc	0.0010433	Pa×s	331.71	Joback Method
dvisc	0.0006843	Pa×s	372.04	Joback Method
dvisc	0.0004874	Pa×s	412.38	Joback Method
dvisc	0.0003688	Pa×s	452.71	Joback Method
dvisc	0.0002921	Pa×s	493.04	Joback Method

Sources

McGowan Method: http://link.springer.com/article/10.1007/BF02311772
NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C700889&Units=SI
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
ie: Ionization energy
log10ws: Log10 of Water solubility in mol/l

logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
pc:	Critical Pressure
rinpol:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume