Methanone, cyclopentylphenyl-

Other names:	Cyclopentyl phenyl ketone
	Benzoylcyclopentane
	Ketone, cyclopentyl phenyl
	Cyclopentanylphenylmethanone
Inchi:	InChI=1S/C12H14O/c13-12(11-8-4-5-9-11)10-6-2-1-3-7-10/h1-3,6-7,11H,4-5,8-9H2
InchiKey:	VYDIMQRLNMMJBW-UHFFFAOYSA-N
Formula:	C12H14O
SMILES:	O=C(c1ccccc1)C1CCCC1
Mol. weight [g/mol]:	174.24
CAS:	5422-88-8

Physical Properties

Property code	Value	Unit	Source
gf	70.20	kJ/mol	Joback Method
hf	-106.58	kJ/mol	Joback Method
hfus	16.41	kJ/mol	Joback Method
hvap	51.58	kJ/mol	Joback Method
log10ws	-3.46		Crippen Method
logp	3.060		Crippen Method
mcvol	146.890	ml/mol	McGowan Method
pc	3100.18	kPa	Joback Method
rinpol	1508.00		NIST Webbook
tb	569.79	K	Joback Method
tc	810.24	K	Joback Method
tf	312.25	K	Joback Method
vc	0.546	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	355.87	J/mol×K	569.79	Joback Method
cpg	374.20	J/mol×K	609.86	Joback Method
cpg	391.16	J/mol×K	649.94	Joback Method
cpg	406.83	J/mol×K	690.01	Joback Method

cpg	421.28	J/mol×K	730.09	Joback Method
cpg	434.57	J/mol×K	770.16	Joback Method
cpg	446.79	J/mol×K	810.24	Joback Method
dvisc	0.0033207	Pa×s	312.25	Joback Method
dvisc	0.0017664	Pa×s	355.17	Joback Method
dvisc	0.0010767	Pa×s	398.10	Joback Method
dvisc	0.0007226	Pa×s	441.02	Joback Method
dvisc	0.0005206	Pa×s	483.94	Joback Method
dvisc	0.0003956	Pa×s	526.87	Joback Method
dvisc	0.0003133	Pa×s	569.79	Joback Method

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	411.00 ± 2.00	K	2.10	NIST Webbook

Sources

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=C5422888&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
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
tbrp:	Boiling point at reduced pressure
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume