

Methanone, (2-methylphenyl)phenyl-

Other names:	Benzophenone, 2-methyl- o-Methylbenzophenone Phenyl o-tolyl ketone 2-Methylbenzophenone (2-Methylphenyl)phenyl-methanone Phenyl 2-tolyl ketone Phenyl tolyl ketone
Inchi:	InChI=1S/C14H12O/c1-11-7-5-6-10-13(11)14(15)12-8-3-2-4-9-12/h2-10H,1H3
InchiKey:	CKGKXGQVRVAKEA-UHFFFAOYSA-N
Formula:	C14H12O
SMILES:	<chem>Cc1ccccc1C(=O)c1ccccc1</chem>
Mol. weight [g/mol]:	196.24
CAS:	131-58-8

Physical Properties

Property code	Value	Unit	Source
gf	153.27	kJ/mol	Joback Method
hf	16.72	kJ/mol	Joback Method
hfus	21.31	kJ/mol	Joback Method
hvap	58.72	kJ/mol	Joback Method
log10ws	-3.91		Crippen Method
logp	3.226		Crippen Method
mvol	162.170	ml/mol	McGowan Method
pc	2915.53	kPa	Joback Method
rinpol	1704.00		NIST Webbook
tb	631.93	K	Joback Method
tc	879.64	K	Joback Method
tf	362.83	K	Joback Method
vc	0.610	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	466.07	J/mol×K	879.64	Joback Method

cpg	390.09	J/molxK	631.93	Joback Method
cpg	405.63	J/molxK	673.21	Joback Method
cpg	419.92	J/molxK	714.50	Joback Method
cpg	433.04	J/molxK	755.78	Joback Method
cpg	445.06	J/molxK	797.07	Joback Method
cpg	456.04	J/molxK	838.35	Joback Method
dvisc	0.0001874	Paxs	631.93	Joback Method
dvisc	0.0017236	Paxs	362.83	Joback Method
dvisc	0.0009716	Paxs	407.68	Joback Method
dvisc	0.0006136	Paxs	452.53	Joback Method
dvisc	0.0004210	Paxs	497.38	Joback Method
dvisc	0.0003075	Paxs	542.23	Joback Method
dvisc	0.0002356	Paxs	587.08	Joback Method
hvapt	65.10	kJ/mol	507.50	NIST Webbook

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	399.20	K	0.04	NIST Webbook
tbrp	582.20	K	102.00	NIST Webbook

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C131588&Units=SI
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

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
hvapt:	Enthalpy of vaporization at a given temperature
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

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