Benzene, 4-chloro-1,2-dimethyl-

Other names:	1-Chloro-3,4-dimethylbenzene
	4-Chloro-1,2-dimethylbenzene
	4-Chloro-o-xylene
	4-Chloro-ortho-xylene
	o-Xylene, 4-chloro-
Inchi:	InChI=1S/C8H9Cl/c1-6-3-4-8(9)5-7(6)2/h3-5H,1-2H3
InchiKey:	HNQLMBJUMVLFCF-UHFFFAOYSA-N
Formula:	C8H9Cl
SMILES:	Cc1ccc(Cl)cc1C
Mol. weight [g/mol]:	140.61
CAS:	615-60-1

Physical Properties

Property code	Value	Unit	Source
gf	97.70	kJ/mol	Joback Method
hf	-10.60	kJ/mol	Joback Method
hfus	13.94	kJ/mol	Joback Method
hvap	41.39	kJ/mol	Joback Method
log10ws	-3.11		Crippen Method
logp	2.957		Crippen Method
mcvol	112.060	ml/mol	McGowan Method
pc	3372.36	kPa	Joback Method
rinpol	1075.00		NIST Webbook
rinpol	1073.00		NIST Webbook
rinpol	1084.00		NIST Webbook
tb	495.20	K	NIST Webbook
tc	676.11	K	Joback Method
tf	261.30	K	Joback Method
vc	0.424	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	202.65	J/mol×K	456.51	Joback Method

cpg	252.92	J/mol×K	639.51	Joback Method
cpg	244.00	J/mol×K	602.91	Joback Method
cpg	234.54	J/mol×K	566.31	Joback Method
cpg	224.50	J/mol×K	529.71	Joback Method
cpg	213.88	J/mol×K	493.11	Joback Method
cpg	261.31	J/mol×K	676.11	Joback Method
dvisc	0.0002426	Pa×s	456.51	Joback Method
dvisc	0.0002952	Pa×s	423.98	Joback Method
dvisc	0.0003710	Pa×s	391.44	Joback Method
dvisc	0.0004860	Pa×s	358.90	Joback Method
dvisc	0.0006718	Pa×s	326.37	Joback Method
dvisc	0.0009978	Pa×s	293.84	Joback Method
dvisc	0.0016353	Pa×s	261.30	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.24147e+01
Coeff. B	-3.30710e+03
Coeff. C	-7.10180e+01
Temperature range (K), min.	343.72
Temperature range (K), max.	536.59

Sources

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=C615601&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

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