Benzene, 2-chloro-1,3-dimethyl-

Other names:	1-Chloro-2,6-dimethylbenzene
	2,6-Dimethylchlorobenzene
	2,6-Dimethylphenyl chloride
	2-Chloro-1,3-dimethylbenzene
	2-Chloro-m-xylene
	m-Xylene, 2-chloro-
Inchi:	InChI=1S/C8H9Cl/c1-6-4-3-5-7(2)8(6)9/h3-5H,1-2H3
InchiKey:	VDXLAYAQGYCQEO-UHFFFAOYSA-N
Formula:	C8H9Cl
SMILES:	Cc1cccc(C)c1Cl
Mol. weight [g/mol]:	140.61
CAS:	6781-98-2

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	1050.00		NIST Webbook
rinpol	1056.00		NIST Webbook
tb	455.70	K	NIST Webbook
tb	459.20	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	261.31	J/mol×K	676.11	Joback Method
cpg	213.88	J/mol×K	493.11	Joback Method
cpg	224.50	J/mol×K	529.71	Joback Method
cpg	234.54	J/mol×K	566.31	Joback Method
cpg	244.00	J/mol×K	602.91	Joback Method
cpg	252.92	J/mol×K	639.51	Joback Method
cpg	202.65	J/mol×K	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	0.0002426	Pa×s	456.51	Joback Method
dvisc	0.0016353	Pa×s	261.30	Joback Method
pvap	0.06	kPa	287.20	Vaporization enthalpies of a series of the fluoro- and chloro-substituted methylbenzenes
pvap	0.09	kPa	293.30	Vaporization enthalpies of a series of the fluoro- and chloro-substituted methylbenzenes
pvap	0.11	kPa	296.30	Vaporization enthalpies of a series of the fluoro- and chloro-substituted methylbenzenes
pvap	0.13	kPa	298.20	Vaporization enthalpies of a series of the fluoro- and chloro-substituted methylbenzenes
pvap	0.13	kPa	298.30	Vaporization enthalpies of a series of the fluoro- and chloro-substituted methylbenzenes
pvap	0.13	kPa	298.30	Vaporization enthalpies of a series of the fluoro- and chloro-substituted methylbenzenes
pvap	0.15	kPa	300.40	Vaporization enthalpies of a series of the fluoro- and chloro-substituted methylbenzenes

pvap	0.21	kPa	305.40	Vaporization enthalpies of a series of the fluoro- and chloro-substituted methylbenzenes
pvap	0.06	kPa	287.10	Vaporization enthalpies of a series of the fluoro- and chloro-substituted methylbenzenes
pvap	0.05	kPa	284.10	Vaporization enthalpies of a series of the fluoro- and chloro-substituted methylbenzenes
pvap	0.04	kPa	282.20	Vaporization enthalpies of a series of the fluoro- and chloro-substituted methylbenzenes
pvap	0.03	kPa	279.20	Vaporization enthalpies of a series of the fluoro- and chloro-substituted methylbenzenes
pvap	0.03	kPa	276.20	Vaporization enthalpies of a series of the fluoro- and chloro-substituted methylbenzenes
pvap	0.02	kPa	274.50	Vaporization enthalpies of a series of the fluoro- and chloro-substituted methylbenzenes
pvap	0.07	kPa	290.10	Vaporization enthalpies of a series of the fluoro- and chloro-substituted methylbenzenes

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.44419e+01

Coeff. B	-3.80081e+03
Coeff. C	-6.87940e+01
Temperature range (K), min.	337.32
Temperature range (K), max.	485.07

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=C6781982&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
Vaporization enthalpies of a series of the fluoro- and chloro-substituted methylbenzenes:	https://www.doi.org/10.1016/j.fluid.2014.07.029

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