Benzene, 1,1'-(chloromethylene)bis-

Other names:	1,1'-(Chloromethylene)bis(benzene)
	Benzhydryl chloride
	Chlorodiphenylmethane
	Diphenylchloromethane
	Diphenylmethyl chloride
	Methane, chlorodiphenyl-
Inchi:	InChI=1S/C13H11Cl/c14-13(11-7-3-1-4-8-11)12-9-5-2-6-10-12/h1-10,13H
InchiKey:	ZDVDCDLBOLSVGM-UHFFFAOYSA-N
Formula:	C13H11Cl
SMILES:	ClC(c1ccccc1)c1ccccc1
Mol. weight [g/mol]:	202.68
CAS:	90-99-3

Physical Properties

Property code	Value	Unit	Source
chl	-6766.80	kJ/mol	NIST Webbook
gf	269.03	kJ/mol	Joback Method
hf	140.39	kJ/mol	Joback Method
hfl	56.10	kJ/mol	NIST Webbook
hfus	18.18	kJ/mol	Joback Method
hvap	53.08	kJ/mol	Joback Method
log10ws	-4.18		Crippen Method
logp	4.015		Crippen Method
mcvol	158.750	ml/mol	McGowan Method
pc	2976.29	kPa	Joback Method
rinpol	1595.70		NIST Webbook
rinpol	1595.70		NIST Webbook
tb	587.19	K	Joback Method
tc	841.51	K	Joback Method
tf	290.15 ± 0.40	K	NIST Webbook
vc	0.591	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	352.50	J/mol×K	587.19	Joback Method
cpg	430.96	J/mol×K	841.51	Joback Method
cpg	420.73	J/mol×K	799.12	Joback Method
cpg	409.48	J/mol×K	756.74	Joback Method
cpg	397.13	J/mol×K	714.35	Joback Method
cpg	383.58	J/mol×K	671.96	Joback Method
cpg	368.73	J/mol×K	629.58	Joback Method
cpl	290.40	J/mol×K	298.50	NIST Webbook
dvisc	0.0014180	Pa×s	351.22	Joback Method
dvisc	0.0001787	Pa×s	587.19	Joback Method
dvisc	0.0002339	Pa×s	540.00	Joback Method
dvisc	0.0003225	Pa×s	492.80	Joback Method
dvisc	0.0004759	Pa×s	445.61	Joback Method
dvisc	0.0007700	Pa×s	398.42	Joback Method
dvisc	0.0031563	Pa×s	304.03	Joback Method
hvapt	70.40	kJ/mol	415.50	NIST Webbook

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	413.20	K	0.40	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.65327e+01
Coeff. B	-7.07929e+03
Temperature range (K), min.	435.78
Temperature range (K), max.	630.88

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=C90993&Units=SI
The Yaws Handbook of Vapor Pressure:	https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure

Legend

chl:	Standard liquid enthalpy of combustion
cpg:	Ideal gas heat capacity
cpl:	Liquid phase heat capacity
dvisc:	Dynamic viscosity
gf:	Standard Gibbs free energy of formation
hf:	Enthalpy of formation at standard conditions
hfl:	Liquid phase 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
pvap:	Vapor 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