Benzene, (1,2-dichloroethyl)-

Other names:	(1,2-Dichloroethyl)benzene
	1,2-Dichloro-1-phenylethane
	1-Phenyl-1,2-dichloroethane
	Styrene dichloride
Inchi:	InChI=1S/C8H8Cl2/c9-6-8(10)7-4-2-1-3-5-7/h1-5,8H,6H2
InchiKey:	GCXHSBQTVXCWBK-UHFFFAOYSA-N
Formula:	C8H8Cl2
SMILES:	ClCC(Cl)c1ccccc1
Mol. weight [g/mol]:	175.06
CAS:	1074-11-9

Physical Properties

Property code	Value	Unit	Source
gf	102.59	kJ/mol	Joback Method
hf	-8.68	kJ/mol	Joback Method
hfus	15.39	kJ/mol	Joback Method
hvap	44.06	kJ/mol	Joback Method
log10ws	-3.04		Crippen Method
logp	3.205		Crippen Method
mcvol	124.300	ml/mol	McGowan Method
pc	3376.28	kPa	Joback Method
rinpol	1249.00		NIST Webbook
tb	483.54	K	Joback Method
tc	711.88	K	Joback Method
tf	251.18	K	Joback Method
vc	0.468	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	227.00	J/mol×K	483.54	Joback Method
cpg	238.86	J/mol×K	521.60	Joback Method
cpg	249.88	J/mol×K	559.65	Joback Method
cpg	260.12	J/mol×K	597.71	Joback Method

cpg	269.60	J/mol×K	635.77	Joback Method
cpg	278.37	J/mol×K	673.83	Joback Method
cpg	286.48	J/mol×K	711.88	Joback Method
dvisc	0.0045517	Pa×s	251.18	Joback Method
dvisc	0.0020744	Pa×s	289.91	Joback Method
dvisc	0.0011378	Pa×s	328.63	Joback Method
dvisc	0.0007083	Pa×s	367.36	Joback Method
dvisc	0.0004826	Pa×s	406.09	Joback Method
dvisc	0.0003516	Pa×s	444.81	Joback Method
dvisc	0.0002695	Pa×s	483.54	Joback Method

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	394.50 ± 3.50	K	2.70	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.43791e+01
Coeff. B	-4.09811e+03
Coeff. C	-8.19990e+01
Temperature range (K), min.	372.82
Temperature range (K), max.	533.95

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C1074119&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
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
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