

Cyclopentane, 1,2-dichloro-, trans-

Other names:	trans-1,2-Dichlorocyclopentane
Inchi:	InChI=1S/C5H8Cl2/c6-4-2-1-3-5(4)7/h4-5H,1-3H2/t4-,5-/m0/s1
InchiKey:	QPIRTTQWLDPXBN-WHFBIAKZSA-N
Formula:	C5H8Cl2
SMILES:	C1C1CCCC1Cl
Mol. weight [g/mol]:	139.02
CAS:	14376-81-9

Physical Properties

Property code	Value	Unit	Source
gf	-3.80	kJ/mol	Joback Method
hf	-137.87	kJ/mol	Joback Method
hfus	12.11	kJ/mol	Joback Method
hvap	35.44	kJ/mol	Joback Method
log10ws	-2.34		Crippen Method
logp	2.385		Crippen Method
mcvol	94.930	ml/mol	McGowan Method
pc	3786.98	kPa	Joback Method
tb	399.27	K	Joback Method
tc	613.25	K	Joback Method
tf	212.61	K	Joback Method
vc	0.353	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	155.57	J/molxK	399.27	Joback Method
cpg	167.59	J/molxK	434.93	Joback Method
cpg	178.95	J/molxK	470.60	Joback Method
cpg	189.67	J/molxK	506.26	Joback Method
cpg	199.76	J/molxK	541.92	Joback Method
cpg	209.27	J/molxK	577.58	Joback Method
cpg	218.19	J/molxK	613.25	Joback Method
dvisc	0.0022761	Paxs	212.61	Joback Method

dvisc	0.0014189	Paxs	243.72	Joback Method
dvisc	0.0009844	Paxs	274.83	Joback Method
dvisc	0.0007357	Paxs	305.94	Joback Method
dvisc	0.0005802	Paxs	337.05	Joback Method
dvisc	0.0004763	Paxs	368.16	Joback Method
dvisc	0.0004032	Paxs	399.27	Joback Method

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=C14376819&Units=SI
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
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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