Cyclohexane, 1,2-dichloro-, trans-

Other names: trans-1,2-Dichlorocyclohexane
1,2-Dichlorocyclohexane, (E)-
Inchi: InChI=1S/C6H10Cl2/c7-5-3-1-2-4-6(5)8/h5-6H,1-4H2/t5-,6-/m1/s1
InchiKey: GZEZIBFVJYNETN-PHDIDXHHSA-N
Formula: C6H10Cl2
SMILES: ClC1CCCCC1Cl
Mol. weight [g/mol]: 153.05
CAS: 822-86-6

Physical Properties

Property code	Value	Unit	Source
gf	-7.48	kJ/mol	Joback Method
hf	-164.67	kJ/mol	Joback Method
hfus	12.60	kJ/mol	Joback Method
hvap	37.84	kJ/mol	Joback Method
log10ws	-2.76		Crippen Method
logp	2.775		Crippen Method
mcvol	109.020	ml/mol	McGowan Method
pc	3476.55	kPa	Joback Method
rinpol	1036.00		NIST Webbook
rinpol	1037.00		NIST Webbook
rinpol	1037.00		NIST Webbook
rinpol	1036.00		NIST Webbook
rinpol	1036.00		NIST Webbook
rinpol	1041.00		NIST Webbook
tb	466.70	K	NIST Webbook
tc	646.96	K	Joback Method
tf	267.00 ± 3.00	K	NIST Webbook
vc	0.402	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	192.32	J/mol×K	426.42	Joback Method

cpg	206.66	J/mol×K	463.18	Joback Method
cpg	220.23	J/mol×K	499.93	Joback Method
cpg	233.04	J/mol×K	536.69	Joback Method
cpg	245.11	J/mol×K	573.44	Joback Method
cpg	256.46	J/mol×K	610.20	Joback Method
cpg	267.11	J/mol×K	646.96	Joback Method
dvisc	0.0039986	Pa×s	220.36	Joback Method
dvisc	0.0020466	Pa×s	254.70	Joback Method
dvisc	0.0012282	Pa×s	289.05	Joback Method
dvisc	0.0008215	Pa×s	323.39	Joback Method
dvisc	0.0005936	Pa×s	357.73	Joback Method
dvisc	0.0004540	Pa×s	392.08	Joback Method
dvisc	0.0003626	Pa×s	426.42	Joback Method
hvapt	45.80	kJ/mol	403.00	NIST Webbook

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C822866&Units=SI
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
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
rinpol: Non-polar retention indices
tb: Normal Boiling Point Temperature

tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume