Cyclobutane, 1,2-dichloro-1,2,3,3,4,4-hexafluoro-

Other names: 1,2-Dichloro-1,2,3,3,4,4-hexafluorocyclobutane
1,2-Dichlorohexafluorocyclobutane
1,2-Dichloroperfluorocyclobutane
Cyclobutane, 1,2-dichlorohexafluoro-

Inchi: InChI=1S/C4Cl2F6/c5-1(7)2(6,8)4(11,12)3(1,9)10

InchiKey: LMHAGAHDHRQIMB-UHFFFAOYSA-N

Formula: C4Cl2F6

SMILES: FC1(F)C(F)(F)C(F)(Cl)C1(F)Cl

Mol. weight [g/mol]: 232.94

CAS: 356-18-3

Physical Properties

Property code	Value	Unit	Source
gf	-1206.36	kJ/mol	Joback Method
hf	-1267.45	kJ/mol	Joback Method
hfus	7.05	kJ/mol	Joback Method
hvap	22.92	kJ/mol	Joback Method
log10ws	-3.25		Crippen Method
logp	3.080		Crippen Method
mcvol	91.460	ml/mol	McGowan Method
pc	3419.86	kPa	Joback Method
tb	332.70	K	NIST Webbook
tb	332.50 ± 0.50	K	NIST Webbook
tc	533.30	K	Joback Method
tf	295.52	K	Joback Method
vc	0.404	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	173.71	J/mol×K	359.36	Joback Method
cpg	184.75	J/mol×K	388.35	Joback Method
cpg	194.10	J/mol×K	417.34	Joback Method
cpg	201.97	J/mol×K	446.33	Joback Method

cpg	208.53	J/mol×K	475.32	Joback Method
cpg	213.96	J/mol×K	504.31	Joback Method
cpg	218.46	J/mol×K	533.30	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.52080e+01
Coeff. B	-3.16643e+03
Coeff. C	-3.34880e+01
Temperature range (K), min.	245.71
Temperature range (K), max.	353.44

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=C356183&Units=SI

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

Legend

cpg: Ideal gas heat capacity
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
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume