Propane, 1,2,2-trichloro-1,1,3,3,3-pentafluoro-

Other names:	1,2,2-Trichloro-1,1,3,3,3-pentafluoropropane
	1,2,2-Trichloropentafluoropropane
	Pentafluoro-1,2,2-trichloropropane
	Propane, 1,2,2-trichloropentafluoro-
	Propane, pentafluoro-1,2,2-trichloro-
Inchi:	InChI=1S/C3Cl3F5/c4-1(5,2(6,7)8)3(9,10)11
InchiKey:	SFCFZNZZFJRHSD-UHFFFAOYSA-N
Formula:	C3Cl3F5
SMILES:	FC(F)(F)C(Cl)(Cl)C(F)(F)Cl
Mol. weight [g/mol]:	237.38
CAS:	1599-41-3

Physical Properties

Property code	Value	Unit	Source
gf	-1026.94	kJ/mol	Joback Method
hf	-1159.27	kJ/mol	Joback Method
hfus	9.27	kJ/mol	Joback Method
hvap	27.45	kJ/mol	Joback Method
log10ws	-3.62		Crippen Method
logp	3.554		Crippen Method
mcvol	98.700	ml/mol	McGowan Method
pc	3138.51	kPa	Joback Method
tb	366.99	K	Joback Method
tc	542.98	K	Joback Method
tf	223.54	K	Joback Method
vc	0.407	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	176.61	J/mol×K	366.99	Joback Method
cpg	184.40	J/mol×K	396.32	Joback Method
cpg	191.42	J/mol×K	425.65	Joback Method
cpg	197.72	J/mol×K	454.99	Joback Method

cpg	203.33	J/mol×K	484.32	Joback Method
cpg	208.31	J/mol×K	513.65	Joback Method
cpg	212.70	J/mol×K	542.98	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.45410e+01
Coeff. B	-3.07467e+03
Coeff. C	-3.71020e+01
Temperature range (K), min.	252.82
Temperature range (K), max.	370.24

Sources

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
NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C1599413&Units=SI

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