Propane, 1,1,2,3-tetrachloro-

Other names: 1,1,2,3-Tetrachloropropane
Inchi: InChI=1S/C3H4Cl4/c4-1-2(5)3(6)7/h2-3H,1H2
InchiKey: BUQMVYQMVLAYRU-UHFFFAOYSA-N
Formula: C3H4Cl4
SMILES: ClCC(Cl)C(Cl)Cl
Mol. weight [g/mol]: 181.88
CAS: 18495-30-2

Physical Properties

Property code	Value	Unit	Source
gf	-78.22	kJ/mol	Joback Method
hf	-178.77	kJ/mol	Joback Method
hfus	13.27	kJ/mol	Joback Method
hvap	39.04	kJ/mol	Joback Method
log10ws	-2.41		Crippen Method
logp	2.636		Crippen Method
mcvol	102.090	ml/mol	McGowan Method
pc	3727.11	kPa	Joback Method
tb	453.15 ± 1.50	K	NIST Webbook
tc	626.28	K	Joback Method
tf	213.25	K	Joback Method
vc	0.388	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	149.81	J/mol×K	416.88	Joback Method
cpg	155.53	J/mol×K	451.78	Joback Method
cpg	160.89	J/mol×K	486.68	Joback Method
cpg	165.91	J/mol×K	521.58	Joback Method
cpg	170.61	J/mol×K	556.48	Joback Method
cpg	174.99	J/mol×K	591.38	Joback Method
cpg	179.08	J/mol×K	626.28	Joback Method
dvisc	0.0088171	Pa×s	213.25	Joback Method

dvisc	0.0036878	Pa×s	247.19	Joback Method
dvisc	0.0019038	Pa×s	281.13	Joback Method
dvisc	0.0011333	Pa×s	315.06	Joback Method
dvisc	0.0007462	Pa×s	349.00	Joback Method
dvisc	0.0005291	Pa×s	382.94	Joback Method
dvisc	0.0003968	Pa×s	416.88	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.43292e+01
Coeff. B	-3.75402e+03
Coeff. C	-6.65700e+01
Temperature range (K), min.	333.92
Temperature range (K), max.	482.86

Sources

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=C18495302&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

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