1,3,4,4-Tetrachloro-1,2,3,4-tetrafluoro butene-1

Other names: 1-Butene, 1,3,4,4-tetrachloro-1,2,3,4-tetrafluoro-
1,2,3,4-Tetrachlorotetrafluoro-1-butene
Inchi: InChI=1S/C4Cl4F4/c5-2(10)1(9)3(6,11)4(7,8)12/b2-1+
InchiKey: CYLIGQKNBPAGBL-OWOJBTEDSA-N
Formula: C4Cl4F4
SMILES: FC(Cl)=C(F)C(F)(Cl)C(F)(Cl)Cl
Mol. weight [g/mol]: 265.85
CAS: 357-20-0

Physical Properties

Property code	Value	Unit	Source
gf	-775.36	kJ/mol	Joback Method
hf	-893.15	kJ/mol	Joback Method
hfus	17.98	kJ/mol	Joback Method
hvap	36.30	kJ/mol	Joback Method
log10ws	-4.57		Crippen Method
logp	4.339		Crippen Method
mcvol	118.960	ml/mol	McGowan Method
pc	2986.06	kPa	Joback Method
tb	435.18	K	Joback Method
tc	632.80	K	Joback Method
tf	228.72	K	Joback Method
vc	0.487	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	234.69	J/mol×K	599.86	Joback Method
cpg	207.65	J/mol×K	435.18	Joback Method
cpg	214.52	J/mol×K	468.12	Joback Method
cpg	220.60	J/mol×K	501.05	Joback Method
cpg	225.95	J/mol×K	533.99	Joback Method
cpg	230.62	J/mol×K	566.92	Joback Method
cpg	238.21	J/mol×K	632.80	Joback Method

hvapt	39.40	kJ/mol	388.00	NIST Webbook

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C357200&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
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
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume