Germanium tetrachloride

Other names:	Extrema
	GeCl4
	Germane, tetrachloro-
	Germanium chloride
	Germanium chloride (GeCl4)
	Germanium(IV) chloride
	Germanium, tetrachloro-
	Tetrachlorogermane
Inchi:	InChI=1S/Cl4Ge/c1-5(2,3)4
InchiKey:	IEXRMSFAVATTJX-UHFFFAOYSA-N
Formula:	Cl4Ge
SMILES:	Cl[Ge](Cl)(Cl)Cl
Mol. weight [g/mol]:	214.45
CAS:	10038-98-9

Physical Properties

Property code	Value	Unit	Source
ie	11.70 ± 0.10	eV	NIST Webbook
ie	11.68 ± 0.05	eV	NIST Webbook
ie	11.88 ± 0.02	eV	NIST Webbook
ie	11.60 ± 0.30	eV	NIST Webbook
log10ws	-0.23		Crippen Method
logp	2.377		Crippen Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
hfust	8.52	kJ/mol	221.70	NIST Webbook
hsubt	44.60 ± 0.20	kJ/mol	204.00	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.24327e+01
Coeff. B	-2.23649e+03
Coeff. C	-7.35000e+01
Temperature range (K), min.	228.15
Temperature range (K), max.	359.70

Sources

Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l

Crippen Method: https://www.chemeo.com/doc/models/crippen_log10ws

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C10038989&Units=SI

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

Legend

hfust: Enthalpy of fusion at a given temperature

hsubt: Enthalpy of sublimation at a given temperature

ie: Ionization energy

log10ws: Log10 of Water solubility in mol/l

logp: Octanol/Water partition coefficient

pvap: Vapor pressure