

Germane, tetramethyl-

Other names:	Tetramethylgermane Tetramethylgermanium (CH3)4Ge Germanium, tetramethyl-
Inchi:	InChI=1S/C4H12Ge/c1-5(2,3)4/h1-4H3
InchiKey:	ZRLCXMPFXYVHGS-UHFFFAOYSA-N
Formula:	C4H12Ge
SMILES:	C[Ge](C)(C)C
Mol. weight [g/mol]:	132.78
CAS:	865-52-1

Physical Properties

Property code	Value	Unit	Source
chl	-3708.90 ± 6.30	kJ/mol	NIST Webbook
chl	-3727.90 ± 8.40	kJ/mol	NIST Webbook
hf	-72.80 ± 8.70	kJ/mol	NIST Webbook
hf	-107.50 ± 6.40	kJ/mol	NIST Webbook
hfl	-134.80 ± 6.40	kJ/mol	NIST Webbook
hfl	-100.10 ± 8.70	kJ/mol	NIST Webbook
hvap	27.30 ± 0.40	kJ/mol	NIST Webbook
ie	9.33 ± 0.04	eV	NIST Webbook
ie	9.56 ± 0.06	eV	NIST Webbook
ie	9.20 ± 0.20	eV	NIST Webbook
ie	9.40 ± 0.10	eV	NIST Webbook
ie	9.29 ± 0.14	eV	NIST Webbook
ie	9.29 ± 0.14	eV	NIST Webbook
ie	11.20	eV	NIST Webbook
log10ws	1.03		Crippen Method
logp	1.954		Crippen Method
sl	296.80	J/mol×K	NIST Webbook
tt	184.36 ± 0.01	K	NIST Webbook

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpl	196.90	J/mol×K	300.00	NIST Webbook
hfust	7.45	kJ/mol	184.37	NIST Webbook
hfust	7.45	kJ/mol	184.40	NIST Webbook
hfust	7.45	kJ/mol	184.40	NIST Webbook
hvapt	28.12	kJ/mol	285.00	NIST Webbook
hvapt	28.10 ± 0.10	kJ/mol	285.00	NIST Webbook
sfust	40.39	J/mol×K	184.37	NIST Webbook
svapt	98.70	J/mol×K	285.00	NIST Webbook

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=C865521&Units=SI>

Legend

chl: Standard liquid enthalpy of combustion
cpl: Liquid phase heat capacity
hf: Enthalpy of formation at standard conditions
hfl: Liquid phase enthalpy of formation at standard conditions
hfust: Enthalpy of fusion at a given temperature
hvap: Enthalpy of vaporization at standard conditions
hvapt: Enthalpy of vaporization at a given temperature
ie: Ionization energy
log10ws: Log10 of Water solubility in mol/l
logp: Octanol/Water partition coefficient
sfust: Entropy of fusion at a given temperature
sl: Liquid phase molar entropy at standard conditions
svapt: Entropy of vaporization at a given temperature
tt: Triple Point Temperature

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