

Tetraethylgermanium

Other names:	Germane, tetraethyl- Tetraethylgermane (C2H5)4Ge Germanium, tetraethyl-
Inchi:	InChI=1S/C8H20Ge/c1-5-9(6-2,7-3)8-4/h5-8H2,1-4H3
InchiKey:	QQXSEZVCKAEYQJ-UHFFFAOYSA-N
Formula:	C8H20Ge
SMILES:	CC[Ge](CC)(CC)CC
Mol. weight [g/mol]:	188.88
CAS:	597-63-7

Physical Properties

Property code	Value	Unit	Source
chl	-6342.90 ± 4.20	kJ/mol	NIST Webbook
chl	-6341.30 ± 7.10	kJ/mol	NIST Webbook
chl	-6356.80 ± 3.20	kJ/mol	NIST Webbook
chl	-6350.50 ± 6.30	kJ/mol	NIST Webbook
hf	-142.90 ± 3.90	kJ/mol	NIST Webbook
hf	-156.80 ± 4.80	kJ/mol	NIST Webbook
hf	-164.90 ± 6.50	kJ/mol	NIST Webbook
hf	-158.40 ± 7.50	kJ/mol	NIST Webbook
hfl	-204.10 ± 7.50	kJ/mol	NIST Webbook
hfl	-210.60 ± 6.50	kJ/mol	NIST Webbook
hfl	-202.50 ± 4.80	kJ/mol	NIST Webbook
hfl	-188.60 ± 3.90	kJ/mol	NIST Webbook
hvap	45.70 ± 0.40	kJ/mol	NIST Webbook
hvap	45.70 ± 0.40	kJ/mol	NIST Webbook
ie	9.30	eV	NIST Webbook
ie	9.80	eV	NIST Webbook
ie	8.90	eV	NIST Webbook
log10ws	-0.64		Crippen Method
logp	3.515		Crippen Method
sl	428.80	J/mol×K	NIST Webbook
tb	435.40 ± 0.50	K	NIST Webbook
tf	180.47 ± 0.20	K	NIST Webbook
tt	180.30 ± 0.20	K	NIST Webbook
tt	179.99 ± 0.02	K	NIST Webbook

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpl	309.60	J/mol×K	298.15	NIST Webbook
cpl	294.70	J/mol×K	298.15	NIST Webbook
hfust	12.31	kJ/mol	179.99	NIST Webbook
hfust	12.62	kJ/mol	180.30	NIST Webbook
hfust	12.41	kJ/mol	180.47	NIST Webbook
hfust	12.31	kJ/mol	180.30	NIST Webbook
hfust	12.31	kJ/mol	180.30	NIST Webbook
hvapt	43.40	kJ/mol	273.00	NIST Webbook
hvapt	46.10	kJ/mol	386.50	NIST Webbook
sfust	68.00	J/mol×K	179.99	NIST Webbook
sfust	70.00	J/mol×K	180.30	NIST Webbook
sfust	68.74	J/mol×K	180.47	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=C597637&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
tb:	Normal Boiling Point Temperature
tf:	Normal melting (fusion) point
tt:	Triple Point Temperature

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