Silane, trichloromethyl-

Other names:	CH3SiCl3
	LS 40
	Methyl-trichlorsilan
	Methylsilicochloroform
	Monomethyltrichlorosilane
	NSC 77069
	SiCH3Cl3
	Silane, methyltrichloro-
	Trichlor-methylsilan
	UN 1250
	methylsilicon trichloride
	methylsilyl trichloride
	methyltrichlorosilane
	trichloro(methyl)silane
	trichloromethylsilane
	trichloromethylsilicon
Inchi:	InChI=1S/CH3Cl3Si/c1-5(2,3)4/h1H3
InchiKey:	JLUFWMXJHAVVNN-UHFFFAOYSA-N
Formula:	CH3Cl3Si
SMILES:	C[Si](Cl)(Cl)Cl
Mol. weight [g/mol]:	149.48
CAS:	75-79-6

Physical Properties

Property code	Value	Unit	Source
ie	11.36 ± 0.03	eV	NIST Webbook
log10ws	0.08		Crippen Method
logp	2.272		Crippen Method
pc	3530.00 ± 11.14	kPa	NIST Webbook
pc	3280.00 ± 32.00	kPa	NIST Webbook
rhoc	430.50 ± 43.35	kg/m3	NIST Webbook
rhoc	439.47 ± 4.48	kg/m3	NIST Webbook
rinpol	594.00		NIST Webbook
rinpol	598.90		NIST Webbook
rinpol	598.00		NIST Webbook
rinpol	600.00		NIST Webbook
sl	262.80	J/mol×K	NIST Webbook

tb	339.50	K	Isobaric vapor liquid equilibrium for methyltrichlorosilane dimethyldichlorosilane benzene system
tb	339.50	K	NIST Webbook
tb	339.23 ± 0.50	K	NIST Webbook
tc	517.80 ± 0.30	K	NIST Webbook
tc	517.00 ± 5.00	K	NIST Webbook
tt	197.37 ± 0.02	K	NIST Webbook

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpl	163.10	J/mol×K	298.15	NIST Webbook
hfust	8.95	kJ/mol	197.40	NIST Webbook
hfust	8.95	kJ/mol	197.40	NIST Webbook
hfust	8.95	kJ/mol	197.37	NIST Webbook
hvapt	30.70	kJ/mol	343.00	NIST Webbook
hvapt	31.20	kJ/mol	312.00	NIST Webbook
sfust	45.31	J/mol×K	197.37	NIST Webbook

Sources

Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Isobaric vapor liquid equilibrium for methyltrichlorosilane dimethyldichlorosilane benzene system:	https://www.doi.org/10.1016/j.fluid.2006.01.014
High pressure phase equilibria for chlorosilane + carbon dioxide mixtures:	https://www.doi.org/10.1016/j.fluid.2008.06.017
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C75796&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l

Legend

cpl:	Liquid phase heat capacity
hfust:	Enthalpy of fusion at a given temperature
hvapt:	Enthalpy of vaporization at a given temperature
ie:	Ionization energy
log10ws:	Log10 of Water solubility in mol/l

logp:	Octanol/Water partition coefficient
pc:	Critical Pressure
rhoc:	Critical density
rinpol:	Non-polar retention indices
sfust:	Entropy of fusion at a given temperature
sl:	Liquid phase molar entropy at standard conditions
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tt:	Triple Point Temperature