Disiloxane, hexamethyl-

Other names:	((CH3)3Si)2O
	1,1,1,3,3,3-hexamethyldisiloxane
	Belsil DM 0.65
	Bis(trimethylsilyl) ether
	Bis(trimethylsilyl) oxide
	Disiloxane, 1,1,1,3,3,3-hexamethyl-
	Dow corning 200/0.65
	Fluka AG
	H7310
	HMDS (hexamethyldisiloxane)
	HMDSO
	Hexamethyldisiloxane
	KF 96L
	NSC 43346
	OS 10
	Oxybis(trimethylsilane)
	SWS-F 221
	Silane, oxybis(trimethyl)-
Inchi:	InChI=1S/C6H18OSi2/c1-8(2,3)7-9(4,5)6/h1-6H3
InchiKey:	UQEAIHBTYFGYIE-UHFFFAOYSA-N
Formula:	C6H18OSi2
SMILES:	C[Si](C)(C)O[Si](C)(C)C
Mol. weight [g/mol]:	162.38
CAS:	107-46-0

Physical Properties

Property code	Value	Unit	Source
affp	846.40	kJ/mol	NIST Webbook
basg	816.20	kJ/mol	NIST Webbook
ie	9.88	eV	NIST Webbook
ie	9.59 ± 0.04	eV	NIST Webbook
ie	9.64 ± 0.01	eV	NIST Webbook
ie	9.60 ± 1.00	eV	NIST Webbook
log10ws	2.48		Crippen Method
logp	2.673		Crippen Method
pc	1925.00 ± 10.00	kPa	NIST Webbook
rinpol	645.00		NIST Webbook

rinpol	597.40		NIST Webbook
rinpol	597.40		NIST Webbook
rinpol	598.00		NIST Webbook
rinpol	646.00		NIST Webbook
sl	433.80	J/mol×K	NIST Webbook
sl	433.84	J/mol×K	NIST Webbook
tb	374.14 ± 0.30	K	NIST Webbook
tb	374.12	K	Isobaric Vapor-Liquid Equilibrium Data for the Acetone + Hexamethyl Disiloxane + Ethyl Acetate Ternary System at 101.3 kPa: Determination and Correlation
tb	374.00	K	NIST Webbook
tb	372.50 ± 0.50	K	NIST Webbook
tb	372.00 ± 3.00	K	NIST Webbook
tb	373.00 ± 3.00	K	NIST Webbook
tb	375.00 ± 3.00	K	NIST Webbook
tb	373.20 ± 1.50	K	NIST Webbook
tc	518.70 ± 0.51	K	NIST Webbook
tt	204.93 ± 0.02	K	NIST Webbook
volm	2.14e-04	m3/mol	Thermodynamic Study of Heptane + Silicone Mixtures. Excess Volumes and Enthalpies at 298.15 K

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpl	311.37	J/mol×K	298.15	NIST Webbook
cpl	311.40	J/mol×K	298.15	NIST Webbook
hfust	11.92	kJ/mol	204.93	NIST Webbook
hfust	11.92	kJ/mol	204.93	NIST Webbook
hfust	11.92	kJ/mol	204.90	NIST Webbook
hfust	11.92	kJ/mol	204.90	NIST Webbook
hvapt	31.30 ± 0.10	kJ/mol	373.00	NIST Webbook
hvapt	36.90	kJ/mol	341.50	NIST Webbook
hvapt	33.10	kJ/mol	327.00	NIST Webbook
hvapt	36.00	kJ/mol	360.00	NIST Webbook
hvapt	34.60 ± 0.10	kJ/mol	332.00	NIST Webbook
hvapt	33.10 ± 0.10	kJ/mol	351.00	NIST Webbook

pvap	101.30	kPa	374.12	Isobaric Vapor-Liquid Equilibrium Data for the Acetone + Hexamethyl Disiloxane + Ethyl Acetate Ternary System at 101.3 kPa: Determination and Correlation
rfi	1.37370		298.15	Determination and Correlation of Vapor Liquid Equilibrium Data for the Ethyl Acetate + Hexamethyl Disiloxane System at 101.3 kPa
rhol	763.87	kg/m3	293.15	The mixing properties of 1,3,5-trimethyl-1,3,5-tris(3,3,3-trifluoropropyl) cyclotrisiloxane with various organosilicon compounds at different temperatures
rhol	747.95	kg/m3	308.15	The mixing properties of 1,3,5-trimethyl-1,3,5-tris(3,3,3-trifluoropropyl) cyclotrisiloxane with various organosilicon compounds at different temperatures
rhol	742.53	kg/m3	313.15	The mixing properties of 1,3,5-trimethyl-1,3,5-tris(3,3,3-trifluoropropyl) cyclotrisiloxane with various organosilicon compounds at different temperatures
rhol	737.07	kg/m3	318.15	The mixing properties of 1,3,5-trimethyl-1,3,5-tris(3,3,3-trifluoropropyl) cyclotrisiloxane with various organosilicon compounds at different temperatures

rhol	731.57	kg/m3	323.15	The mixing properties of 1,3,5-trimethyl-1,3,5-tris(3,3,3-trifluoropropyl) cyclotrisiloxane with various organosilicon compounds at different temperatures
rhol	726.05	kg/m3	328.15	The mixing properties of 1,3,5-trimethyl-1,3,5-tris(3,3,3-trifluoropropyl) cyclotrisiloxane with various organosilicon compounds at different temperatures
sfust	58.18	J/mol×K	204.93	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.40019e+01
Coeff. B	-2.95909e+03
Coeff. C	-5.80520e+01
Temperature range (K), min.	273.82
Temperature range (K), max.	398.55

Sources

The Yaws Handbook of Vapor Pressure:	https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure
Isobaric Vapor Liquid Equilibrium for the Binary System of Hexamethyl Disiloxane + Isopropyl Acetate at Atmospheric Pressure:	https://www.doi.org/10.1021/je400245u
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C107460&Units=SI
Isobaric Vapor-Liquid Equilibrium Data for the Acetone + Hexamethyl Disiloxane + Ethyl Acetate Ternary System at 101.3 kPa: Determination and Correlation:	https://www.doi.org/10.1021/acs.jced.8b00488
The mixing properties of 1,3,5-trimethyl-1,3,5-tris(3,3,3-trifluoropropyl) cyclotrisiloxane with various organosilicon compounds at different temperatures:	https://www.doi.org/10.1016/j.jct.2014.09.010
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Determination and Correlation of Vapor Liquid Equilibrium Data for the Ethyl Acetate + Hexamethyldisiloxane System at 101.3 kPa:	https://www.doi.org/10.1021/je2008445
Thermodynamic Study of Heptane + Silicone Mixtures. Excess Volumes and Enthalpies at 298.15 K:	https://www.doi.org/10.1021/je2007378
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Bubble-Point Measurements and Modeling of Binary Mixtures of Linear Siloxanes:	https://www.doi.org/10.1021/acs.jced.8b00200

Legend

affp:	Proton affinity
basg:	Gas basicity
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
pvap:	Vapor pressure
rfi:	Refractive Index
rhol:	Liquid 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
volm:	Molar Volume