

# Cyclohexasiloxane, dodecamethyl-

<b>Other names:</b>	Dodecamethylcyclohexasiloxane
<b>Inchi:</b>	InChI=1S/C12H36O6Si6/c1-19(2)13-20(3,4)15-22(7,8)17-24(11,12)18-23(9,10)16-21(5,6)
<b>InchiKey:</b>	IUMSDRXLFWAGNT-UHFFFAOYSA-N
<b>Formula:</b>	C12H36O6Si6
<b>SMILES:</b>	C[Si]1(C)O[Si](C)(C)O[Si](C)(C)O[Si](C)(C)O[Si](C)(C)O[Si](C)(C)O[Si](C)(C)O1
<b>Mol. weight [g/mol]:</b>	444.92
<b>CAS:</b>	540-97-6

## Physical Properties

Property code	Value	Unit	Source
log10ws	8.94		Crippen Method
logp	4.310		Crippen Method
rinpol	1341.00		NIST Webbook
rinpol	1359.00		NIST Webbook
rinpol	1342.00		NIST Webbook
rinpol	1349.90		NIST Webbook
rinpol	1351.00		NIST Webbook
rinpol	1346.00		NIST Webbook
rinpol	1348.00		NIST Webbook
rinpol	1363.00		NIST Webbook
rinpol	1348.00		NIST Webbook
rinpol	1350.00		NIST Webbook
rinpol	1351.00		NIST Webbook
rinpol	1353.00		NIST Webbook
rinpol	1359.00		NIST Webbook
rinpol	1339.00		NIST Webbook
tf	270.00 ± 0.10	K	NIST Webbook

## Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
hfust	28.58	kJ/mol	269.00	NIST Webbook
hfust	28.58	kJ/mol	269.00	NIST Webbook
hvapt	56.10	kJ/mol	471.00	NIST Webbook

hvapt	62.60	kJ/mol	424.50	NIST Webbook
pvap	1.59	kPa	398.15	Temperature-Dependent Vapor Pressure of Selected Cyclic and Linear Polydimethylsiloxane Oligomers
pvap	0.96	kPa	388.15	Temperature-Dependent Vapor Pressure of Selected Cyclic and Linear Polydimethylsiloxane Oligomers
pvap	0.56	kPa	378.15	Temperature-Dependent Vapor Pressure of Selected Cyclic and Linear Polydimethylsiloxane Oligomers
pvap	2.56	kPa	408.15	Temperature-Dependent Vapor Pressure of Selected Cyclic and Linear Polydimethylsiloxane Oligomers
pvap	4.04	kPa	418.15	Temperature-Dependent Vapor Pressure of Selected Cyclic and Linear Polydimethylsiloxane Oligomers
pvap	0.32	kPa	368.15	Temperature-Dependent Vapor Pressure of Selected Cyclic and Linear Polydimethylsiloxane Oligomers
pvap	0.18	kPa	358.15	Temperature-Dependent Vapor Pressure of Selected Cyclic and Linear Polydimethylsiloxane Oligomers
pvap	0.10	kPa	348.15	Temperature-Dependent Vapor Pressure of Selected Cyclic and Linear Polydimethylsiloxane Oligomers

pvap

0.05

kPa

338.15

Temperature-Dependent  
Vapor Pressure  
of Selected  
Cyclic and Linear  
Polydimethylsiloxane  
Oligomers

## Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.36467e+01
Coeff. B	-3.65424e+03
Coeff. C	-1.13360e+02
Temperature range (K), min.	386.90
Temperature range (K), max.	551.77

## Sources

NIST Webbook:

<http://webbook.nist.gov/cgi/cbook.cgi?ID=C540976&Units=SI>

The Yaws Handbook of Vapor

<https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure>

Pressure:

Crippen Method:

<http://pubs.acs.org/doi/abs/10.1021/ci9903071>

Crippen Method:

[https://www.chemeo.com/doc/models/crippen\\_log10ws](https://www.chemeo.com/doc/models/crippen_log10ws)

Temperature-Dependent Vapor  
Pressure of Selected Cyclic and Linear  
Polydimethylsiloxane Oligomers:

<https://www.doi.org/10.1021/je100835n>

## Legend

<b>hfust:</b>	Enthalpy of fusion at a given temperature
<b>hvapt:</b>	Enthalpy of vaporization at a given temperature
<b>log10ws:</b>	Log10 of Water solubility in mol/l
<b>logp:</b>	Octanol/Water partition coefficient
<b>pvap:</b>	Vapor pressure
<b>rinpola:</b>	Non-polar retention indices
<b>tf:</b>	Normal melting (fusion) point

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