

# 1,3,5,7-Tetramethyl-1,3,5,7-tetravinylcyclotetrasiloxane

<b>Other names:</b>	2,4,6,8-tetramethyl-2,4,6,8-tetraethenylcyclotetrasiloxane 2,4,6,8-tetramethyl-2,4,6,8-tetravinylcyclotetrasiloxane
<b>Inchi:</b>	InChI=1S/C12H24O4Si4/c1-9-17(5)13-18(6,10-2)15-20(8,12-4)16-19(7,11-3)14-17/h9-12
<b>InchiKey:</b>	VMAWODUEPLAHOE-UHFFFAOYSA-N
<b>Formula:</b>	C12H24O4Si4
<b>SMILES:</b>	C=C[Si]1(C)O[Si](C)(C=C)O[Si](C)(C=C)O[Si](C)(C=C)O1
<b>Mol. weight [g/mol]:</b>	344.66

## Physical Properties

Property code	Value	Unit	Source
log10ws	4.62		Crippen Method
logp	3.255		Crippen Method
rinpol	1512.00		NIST Webbook
rinpol	1512.00		NIST Webbook

## Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
rfi	1.43415		293.15	Volumetric and refractive properties of 1,3,5,7-tetravinyl-1,3,5,7-tetramethylcyclotetrasiloxane with methoxybenzene, chlorobenzene, tert-butylbenzene and nitrobenzene at T = (298.15-318.15) K

rfi	1.43231	298.15	Volumetric and refractive properties of 1,3,5,7-tetravinyl-1,3,5,7-tetramethylcyclotetrasiloxane with methoxybenzene, chlorobenzene, tert-butylbenzene and nitrobenzene at T = (298.15-318.15) K
rfi	1.42994	303.15	Volumetric and refractive properties of 1,3,5,7-tetravinyl-1,3,5,7-tetramethylcyclotetrasiloxane with methoxybenzene, chlorobenzene, tert-butylbenzene and nitrobenzene at T = (298.15-318.15) K
rfi	1.42756	308.15	Volumetric and refractive properties of 1,3,5,7-tetravinyl-1,3,5,7-tetramethylcyclotetrasiloxane with methoxybenzene, chlorobenzene, tert-butylbenzene and nitrobenzene at T = (298.15-318.15) K
rfi	1.42521	313.15	Volumetric and refractive properties of 1,3,5,7-tetravinyl-1,3,5,7-tetramethylcyclotetrasiloxane with methoxybenzene, chlorobenzene, tert-butylbenzene and nitrobenzene at T = (298.15-318.15) K
rfi	1.42284	318.15	Volumetric and refractive properties of 1,3,5,7-tetravinyl-1,3,5,7-tetramethylcyclotetrasiloxane with methoxybenzene, chlorobenzene, tert-butylbenzene and nitrobenzene at T = (298.15-318.15) K

rho1	987.65	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
rho1	982.54	kg/m3	298.15	Effect of temperature and composition on the density, refractive index, and excess quantities of binary mixtures of 2,4,6,8-tetramethyl-2,4,6,8-tetraethenylcyclotetrasiloxane with aromatic hydrocarbons
rho1	972.34	kg/m3	308.15	Effect of temperature and composition on the density, refractive index, and excess quantities of binary mixtures of 2,4,6,8-tetramethyl-2,4,6,8-tetraethenylcyclotetrasiloxane with aromatic hydrocarbons
rho1	962.14	kg/m3	318.15	Effect of temperature and composition on the density, refractive index, and excess quantities of binary mixtures of 2,4,6,8-tetramethyl-2,4,6,8-tetraethenylcyclotetrasiloxane with aromatic hydrocarbons
rho1	951.94	kg/m3	328.15	Effect of temperature and composition on the density, refractive index, and excess quantities of binary mixtures of 2,4,6,8-tetramethyl-2,4,6,8-tetraethenylcyclotetrasiloxane with aromatic hydrocarbons

rho	992.74	kg/m <sup>3</sup>	288.15	Effect of temperature and composition on the density, refractive index, and excess quantities of binary mixtures of 2,4,6,8-tetramethyl-2,4,6,8-tetraethenylcyclotetrasiloxane with aromatic hydrocarbons
rho	972.29	kg/m <sup>3</sup>	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
rho	967.16	kg/m <sup>3</sup>	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
rho	962.01	kg/m <sup>3</sup>	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
rho	956.88	kg/m <sup>3</sup>	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
rho	951.69	kg/m <sup>3</sup>	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

rho1	972.64	kg/m3	308.15	Volumetric and refractive properties of the mixtures of 1,1,3,3-tetramethyl-1,3-diphenyldisiloxane with various organosilicon compounds at T = (308.15 to 328.15) K
rho1	967.49	kg/m3	313.15	Volumetric and refractive properties of the mixtures of 1,1,3,3-tetramethyl-1,3-diphenyldisiloxane with various organosilicon compounds at T = (308.15 to 328.15) K
rho1	962.36	kg/m3	318.15	Volumetric and refractive properties of the mixtures of 1,1,3,3-tetramethyl-1,3-diphenyldisiloxane with various organosilicon compounds at T = (308.15 to 328.15) K
rho1	957.20	kg/m3	323.15	Volumetric and refractive properties of the mixtures of 1,1,3,3-tetramethyl-1,3-diphenyldisiloxane with various organosilicon compounds at T = (308.15 to 328.15) K
rho1	952.03	kg/m3	328.15	Volumetric and refractive properties of the mixtures of 1,1,3,3-tetramethyl-1,3-diphenyldisiloxane with various organosilicon compounds at T = (308.15 to 328.15) K

## Sources

NIST Webbook:

<http://webbook.nist.gov/cgi/cbook.cgi?ID=B6006234&Units=SI>

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)

Effect of temperature and composition on the density, refractive index, and excess quantities of binary mixtures of 2,4,6,8-tetramethyl-2,4,6,8-tetraethenylcyclotetrasiloxane with aromatic hydrocarbons:

<https://www.doi.org/10.1016/j.jct.2012.08.010>

The mixing properties of 1,3,5-trimethyl-1,3,5-tris(3,3,3-trifluoropropyl) cyclotetrasiloxane with various organosilicon compounds at T = (308.15 to 328.15) K: <https://www.doi.org/10.1016/j.jct.2014.09.010>  
Volume and refractive properties of 1,3,5-trimethyl-1,3,5-tris(3,3,3-trifluoropropyl) cyclotetrasiloxane with various organosilicon compounds at T = (308.15 to 328.15) K: <https://www.doi.org/10.1016/j.jct.2018.09.021>  
Volume and refractive properties of 1,3,5-trimethyl-1,3,5-tris(3,3,3-trifluoropropyl) cyclotetrasiloxane with various organosilicon compounds at T = (308.15 to 328.15) K: <https://www.doi.org/10.1021/acs.jced.5b00820>  
Volume and refractive properties of 1,1,2,2-tetraethyl-1,3-diphenyldisiloxane with various organosilicon compounds at T = (308.15 to 328.15) K: <https://www.doi.org/10.1021/acs.jced.5b00820>

## Legend

**log10ws:** Log10 of Water solubility in mol/l  
**logp:** Octanol/Water partition coefficient  
**rfi:** Refractive Index  
**rho:** Liquid Density  
**rinpol:** Non-polar retention indices

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