Silicic acid (H4SiO4), tetrabutyl ester

Other names:	Butyl silicate ((BuO)4Si)
	Butyl silicate ((C4H9O)4Si)
	CT1750
	NSC 89762
	Silane, tetrabutoxy-
	Silicic acid, tetrabutyl ester
	Silicon tetrabutoxide
	T1750
	Tetra-n-butoxysilane
	Tetrabutoxysilane
	Tetrabutyl orthosilicate
	Tetrabutyl silicate
	tetra-n-Butyl orthosilicate
Inchi:	InChI=1S/C16H36O4Si/c1-5-9-13-17-21(18-14-10-6-2,19-15-11-7-3)20-16-12-8-4/h5-16H
InchiKey:	UQMOLLPKNHFRAC-UHFFFAOYSA-N
Formula:	C16H36O4Si
SMILES:	CCCCO[Si](OCCCC)(OCCCC)OCCCC
Mol. weight [g/mol]:	320.54
CAS:	4766-57-8

Physical Properties

Property code	Value	Unit	Source
hvap	52.00 ± 1.00	kJ/mol	NIST Webbook
log10ws	-2.67		Crippen Method
logp	4.689		Crippen Method
pc	1100.00	kPa	Vapor-Liquid Critical Properties of Some Tetraalkoxysilanes
rinpol	1490.00		NIST Webbook
rinpol	1480.00		NIST Webbook
rinpol	1483.20		NIST Webbook
rinpol	1488.00		NIST Webbook
rinpol	1488.00		NIST Webbook
rinpol	1488.00		NIST Webbook

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpl	580.20	J/mol×K	298.15	NIST Webbook
hvapt	79.60	kJ/mol	406.00	NIST Webbook

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	393.00	K	0.40	NIST Webbook

Sources

Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Vapor-Liquid Critical Properties of Some Tetraalkoxysilanes:	https://www.doi.org/10.1021/je800086s
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C4766578&Units=SI

Legend

cpl:	Liquid phase heat capacity
hvap:	Enthalpy of vaporization at standard conditions
hvapt:	Enthalpy of vaporization at a given temperature
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
pc:	Critical Pressure
rinpol:	Non-polar retention indices
tbrp:	Boiling point at reduced pressure

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