

Silicic acid (H4SiO4), tetrapropyl ester

Other names:	CT2090 Dynasil P Propyl orthosilicate Propyl silicate Propyl silicate ((PrO)4Si) Silane, tetrapropoxy- Silicon orthopropoxide Silicon tetrapropoxide Tetra-n-propoxysilane Tetrapropoxysilane Tetrapropyl orthosilicate Tetrapropyl silicate Tetrapropyloxysilane tetra-n-Propyl orthosilicate
Inchi:	InChI=1S/C12H28O4Si/c1-5-9-13-17(14-10-6-2,15-11-7-3)16-12-8-4/h5-12H2,1-4H3
InchiKey:	ZQZCOBSUOFHDEE-UHFFFAOYSA-N
Formula:	C12H28O4Si
SMILES:	CCCO[Si](OCCC)(OCCC)OCCC
Mol. weight [g/mol]:	264.43
CAS:	682-01-9

Physical Properties

Property code	Value	Unit	Source
hvac	49.80 ± 0.80	kJ/mol	NIST Webbook
hvac	49.80 ± 0.40	kJ/mol	NIST Webbook
log10ws	-0.99		Crippen Method
logp	3.128		Crippen Method
pc	1370.00	kPa	Vapor-Liquid Critical Properties of Some Tetraalkoxysilanes
rinpol	1162.30		NIST Webbook
rinpol	1163.00		NIST Webbook
rinpol	1160.00		NIST Webbook
rinpol	1163.00		NIST Webbook
rinpol	1170.00		NIST Webbook
rinpol	1157.00		NIST Webbook

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpl	460.10	J/mol×K	298.15	NIST Webbook
hvapt	66.90	kJ/mol	435.00	NIST Webbook

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	367.00	K	0.70	NIST Webbook

Sources

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=C682019&Units=SI>
Crippen Method: <http://pubs.acs.org/doi/abs/10.1021/ci9903071>

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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