

Silicon

Reaction	Baes and Mesmer, 1976	Thoenen et al., 2014
$\text{Si(OH)}_4 \rightleftharpoons \text{Si(OH)}_3^- + \text{H}^+$	-9.86	-9.81 ± 0.02
$\text{Si(OH)}_4 \rightleftharpoons \text{SiO}_2(\text{OH})_2^{2-} + 2 \text{H}^+$	-22.92	-23.14 ± 0.09
$4 \text{Si(OH)}_4 \rightleftharpoons \text{Si}_4\text{O}_6(\text{OH})_6^{2-} + 2 \text{H}^+ + 4 \text{H}_2\text{O}$	-13.44	
$4 \text{Si(OH)}_4 \rightleftharpoons \text{Si}_4\text{O}_8(\text{OH})_4^{4-} + 4 \text{H}^+ + 4 \text{H}_2\text{O}$	-35.80	-36.3 ± 0.2
$\text{SiO}_2(\text{quartz}) + 2 \text{H}_2\text{O} \rightleftharpoons \text{Si(OH)}_4$	-4.0	-3.739 ± 0.087
$\text{SiO}_2(\text{am}) + 2 \text{H}_2\text{O} \rightleftharpoons \text{Si(OH)}_4$		-2.714

C.F. Baes and R.E. Mesmer, The Hydrolysis of Cations. Wiley, New York, 1976; pp. 336–342.

T. Thoenen, W. Hummel, U. Berner and E. Curti, The PSI/Nagra Chemical Thermodynamic Database 12/07, Paul Scherrer Institut, Villigen PSI, Switzerland, 2014, pp. 205–212.