

# Magnesium

Reaction	Baes and Mesmer, 1976	Nordstrom et al., 1990	Brown and Ekberg, 2016
$\text{Mg}^{2+} + \text{H}_2\text{O} \rightleftharpoons \text{MgOH}^+ + \text{H}^+$	-11.44	-11.44	-11.70 ± 0.04
$4 \text{Mg}^{2+} + 4 \text{H}_2\text{O} \rightleftharpoons \text{Mg}_4(\text{OH})_4^{4+} + 4 \text{H}^+$	-39.71		
$\text{Mg}(\text{OH})_2(\text{cr}) + 2 \text{H}^+ \rightleftharpoons \text{Mg}^{2+} + 2 \text{H}_2\text{O}$	16.84	16.84	17.11 ± 0.04

C.F. Baes and R.E. Mesmer, The Hydrolysis of Cations. Wiley, New York, 1976, p. 89.

P.L. Brown and C. Ekberg, Hydrolysis of Metal Ions. Wiley, 2016, pp. 178–195.

D.K. Nordstrom, L.N. Plummer, D. Langmuir, E. Busenberg, H.M. May, B.F. Jones and D.L. Parkhurst, Revised chemical equilibrium data for major water-mineral reactions and their limitations. In: Chemical Modeling of Aqueous Systems II. D.C. Melchior and R.L. Bassett (eds.). ACS Symposium Series 416. ACS, Washington DC, 1990, pp. 398-446.