

autoprotolysis constant

The product of the activities (or, more approximately, concentrations) of the species produced as the result of autoprotolysis. For solvents in which no other ionization processes are significant the term is synonymous with 'ionic product'. The autoprotolysis constant for water, K_w , is equal to the product of activities:

$$a(\text{H}_3\text{O}^+) a(\text{OH}^-) = 1.0 \times 10^{-14}$$

at 25 °C.

Source:

PAC, 1994, 66, 1077 (*Glossary of terms used in physical organic chemistry (IUPAC Recommendations 1994)*) on page 1087