nucleophilicity

- 1. The property of being nucleophilic.
- 2. The relative reactivity of a nucleophilic reagent. (It is also sometimes referred to as 'nucleophilic power'.) Qualitatively, the concept is related to Lewis basicity. However, whereas Lewis basicity is measured by relative equilibrium constants:

$$B^{\bullet} + A \stackrel{K}{\rightleftharpoons} B^{+}A^{-}$$

nucleophilicity of a Lewis base is measured by relative rate constants of different nucleophilic reagents towards a common substrate, most commonly involving formation of a bond to carbon:

$$B^{\bullet} + A - Z \stackrel{K}{\rightleftharpoons} B^{+} A^{-} + Z^{-}$$

See also: electrophilicity, Ritchie equation, Swain–Scott equation

Source:

PAC, 1994, 66, 1077 (Glossary of terms used in physical organic chemistry (IUPAC Recommendations 1994)) on page 1146