

symmetry number, s

The symmetry number of a molecule is obtained by imagining all identical atoms to be labelled, and then counting the number of different but equivalent arrangements that can be obtained by rotating (but not reflecting) the molecule. In the statistical-mechanical treatment of chemical equilibrium, the partition function for each molecular species must be divided by its symmetry number.

Source:

PAC, 1996, 68, 149 (*A glossary of terms used in chemical kinetics, including reaction dynamics (IUPAC Recommendations 1996)*) on page 189

Green Book, 2nd ed., p. 40