spin-statistical factor (in diffusion-controlled reactions)

From the possible encounter pairs between states of different spin multiplicity, only those conserving multiplicity in going to products are expected to react.

Note:
This factor determines the efficiency of diffusion-controlled reactions, which have an encounter-controlled rate. Typical examples are quenching of fluorescence of aromatic hydrocarbons by O₂, quenching of triplet states by O₂, and triplet–triplet annihilation.

Source:
PAC, 2007, 79, 293 (Glossary of terms used in photochemistry, 3rd edition (IUPAC Recommendations 2006)) on page 428