**reflectance, \( \rho \)**

**Also contains definitions of:** reflectance factor, reflectivity

Fraction of incident radiation reflected by a surface or discontinuity, \( \rho(\lambda) = \frac{P_{\text{ren}}}{P_{\lambda}^0} \), where \( P_{\lambda}^0 \) and \( P_{\lambda}^{\text{ren}} \) are, respectively, the incident and reflected spectral radiant power.

Note:
The reflectance for a beam of light normally incident on a surface separating two materials of refractive indices \( n_1 \) and \( n_2 \) is given by

\[
\rho(\lambda) = \frac{(n_1 - n_2)^2}{(n_1 + n_2)^2}
\]

Reflectance increases as the angle of incidence decreases from 90 degrees.

**Source:**
PAC, 2007, 79, 293 (Glossary of terms used in photochemistry, 3rd edition (IUPAC Recommendations 2006)) on page 413