Applications Note

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Opacity

Background

The opacity of a material is an indication of how much light passes through the material. The higher the opacity, the lower the amount of light that can pass through the material. Generally, opacity is calculated from reflectance measurements of the material with a black backing and the material with a white backing.

Conditions for Measurement

Instrumental: Most HunterLab color measurement instruments. Availability may depend on the software package.

Illuminant: Any

Standard Observer Function: 2 or 10 degree

Transmittance and/or Reflectance: Reflectance.

Formulas

$$\text{Opacity} = \frac{Y_{\text{black backing}}}{Y_{\text{white backing}}} \times 100\%$$

where Y is the CIE tristimulus value Y.

Typical Applications

Opacity measurements are done on a variety of materials to determine the amount of light that passes through the materials.

For Additional Information Contact:

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