Reflectance Meter

BGD581-S

Product Description

The BGD 581-S Reflectance Meter is a newly developed portable reflectometer featuring full touchscreen operation. It is widely applicable for measuring the hiding power of paints, varnishes, light-colored coatings, color pastes, pigments, and various colorants on substrates.



Why Reflectance Matters

Hiding power is one of the key quality properties of paints and coatings. It determines how well a coating covers the colour and contrast of the substrate underneath, and therefore how many coats are needed, how much material is consumed per square metre and how consistent the final appearance will be. For manufacturers, hiding power directly affects formulation cost, pigment efficiency and product claims; for users, it affects coverage, labour time and the visual result.
Hiding power is determined objectively by measuring reflectance. The coating is applied at a defined film thickness or spreading rate over a black and a white area of a contrast chart or substrate. The ratio between the reflectance over black and the reflectance over white gives the contrast ratio (opacity): the closer this value is to 100%, the better the coating hides the substrate. Because small differences in reflectance can have a large effect on coverage, accurate, repeatable and traceable reflectance measurement is essential for quality control, product development and comparison of raw materials

Standards

- **EN ISO 2814:** Paints and varnishes – Comparison of contrast ratio (hiding power) of paints of the same type and colour
- **ISO 6504-3:** Paints and varnishes – Determination of hiding power – Part 3: Determination of hiding power of paints for masonry, concrete and interior use (earlier edition: Determination of contrast ratio of light-coloured paints at a fixed spreading rate)
- **ASTM D2805:** Standard Test Method for Hiding Power of Paints by Reflectometry
- **ASTM E97:** Standard Test Method for Directional Reflectance Factor, 45-deg 0-deg, of Opaque Specimens by Broad-Band Filter Reflectometry (withdrawn 1991)
- **DIN 55984:** Testing of pigments – Determination of a hiding power value of white and light grey media (withdrawn)
- **BS 3900-D6:** Methods of test for paints – Optical tests on paint films – Determination of contrast ratio (opacity) of light-coloured paints at a fixed spreading rate, using polyester film

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- **BS 3900-D7:** Methods of test for paints – Optical tests on paint films – Determination of hiding power of white and light-coloured paints by the Kubelka-Munk method

Technical Specification

- Conforms EN ISO 2814, ISO 6504-3, ASTM D2805, ASTM E97, DIN 55984, BS 3900-D6/D7
- Portable design for easy carrying and on-site measurements
- 2.4-inch full-color touchscreen with clear display and simple, intuitive operation
- Combined LED light source and dual-channel CMOS spectrophotometric sensor ensure higher testing accuracy
- No zero calibration required, simple and convenient operation
- Special moisture-proof design allows reliable use in harsh environments
- Instant measurement, no warm-up time, stable readings with no drift, enabling fast results
- Long-life light source (over 3 million measurements in 5 years) with no need for replacement
- Nationally calibrated whiteboard ensures traceable and reliable measurements

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Main Technical Parameters

Ordering Information: BGD 581-S – Reflectance Meter

Disclaimer

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