

# Multifunction Wet Abrasion Scrub Tester ('multi-standard')

**BGD 528**

## Product Description

BGD 528 Multifunction Abrasion Scrub Tester is a powerful abrasion tester. By changing different abrasion heads, it can conform all testing standards for linear reciprocating abrasion, including wet abrasion scrub, sponge washability, scrub resistance, cleanability, dirt pickup resistance, MEK test, Rub test etc.

Moreover, this machine use touch screen to operate, user can set all required test parameters directly through touch screen, and also can check its working status at any time. Very easy and convenient to operate it.



## Standards

- ISO 11998 Paints and varnishes - Determination of wet-scrub resistance and cleanability of coatings
- ASTM D 2486 Standard Test Methods for Scrub Resistance of Wall Paints
- ASTM D 3450 Standard Test Method for Washability Properties of Interior Architectural Coatings
- ASTM D 4213 Standard Test Method for Scrub Resistance of Paints by Abrasion Weight Loss
- ASTM D 4828 Standard Test Methods for Practical Washability of Organic Coatings
- ASTM D 4752 Standard Practice for Measuring MEK Resistance of Ethyl Silicate (Inorganic) Zinc-Rich Primers by Solvent Rub
- DIN EN 13300 Paints and varnishes - Water-borne coating materials and coating systems for interior walls and ceilings

## Technical Specification

With double working channels, each channel is equipped with a separate container for scrub medium . Operator can use two different type mediums to do two different tests, also can do wet abrasion and dry abrasion test at the same time. Working speed can be set from 5-95 times/minutes freely. Working distance can be set from 0-300 mm freely, meet with different standards. Push-rod design for reciprocating motion, thus working speed is more stable and more even and can get more reliable test results. With peristaltic pump, operator can set and control precisely scrub medium flow. Installing and dismantling test panels or replacing different abrasion heads is more convenient and faster. All machine is made up of aluminum alloy, beautiful and strong, has a longer service time. Compatible with 110V/220V and 50Hz /60 Hz.

# Multifunction Wet Abrasion Scrub Tester ('multi-standard')

**BGD 528**

## Main Technical Parameters

- Stroke Length: 0~300mm (adjustable)
- Frequency of travel: 5~95 times/min (adjustable)
- Range of count: 0~9,999 times
- Size of test plate: 430x150x0.03 mm
- Power of motor: 25W
- Power: 110V~220V ; 50/60 Hz
- Overall size: 500x460x280mm
- Capacity of Water Container: 500ml x 2

### DIN and ASTM Standards

*The BGD 528 Wet Abrasion Scrub Tester is designed to comply with four DIN methods and four ASTM methods.*

The **Standards EN ISO 11998 and DIN EN 13330 (replaced DIN 53778)** describe procedures to evaluate the resistance of coatings against abrasion by cleaning or scrubbing the surface. The coating is applied on a foil and dried under standard conditions. In order to describe the cleanability, defined pollutions are applied onto the surface before starting the test.

**DIN 53 778 (\*withdrawn 08/2007):** Dispersion Paints Cleanability: Test area should be free of pollutions Wash resistance: Evaluation after 1000 scrub cycles Scrub resistance: Evaluation after 5000 scrub cycles The test is performed wet using a hog bristle brush and a pump to apply the washing liquid. The evaluation is done visually.

**ISO 11998** The ISO test method describes a short version of the scrub abrasion test. This test uses "\\3M Scotch Brite 7448\\" pads and the washing liquid is manually applied before starting the test. The test is finished for evaluation after 200 scrub-cycles. The evaluation of the wash/scrub resistance is done by calculating the loss of mass.

**DIN EN 13300** This standard describes the various testing methods for waterborne coating materials and coating systems for interior walls and ceilings. One quality criterion mentioned is the wet-abrasion resistance tested in accordance to EN ISO 11998. Additionally, a rating scale dependent on the amount of abrasion is used for final classification.

# Multifunction Wet Abrasion Scrub Tester ('multi-standard')

## BGD 528

ASTM Standards
<b>ASTM D 2486</b> The scrub resistance of interior wall paint is the primary purpose of this method. The paint is applied to a black plastic panel and allowed to cure. The panel is scrubbed with a nylon bristle brush until failure occurs. An abrasive scrub media is used to accelerate the test.
<b>ASTM D 3450</b> This test method determines the ease of removing soilant discoloration from interior coatings. The coating is drawdown on a black plastic panel and allowed to dry for seven days. A specified soilant medium is applied. The coating is scrubbed with an abrasive or non-abrasive media using a cellulosic type sponge for 100 cycles. The soilant removal is assessed by measuring the CIE Y reflectance before and after the test.
<b>ASTM D 4213</b> The purpose of this method is to measure scrub resistance. The primary differences from ASTM D 2486 method are: The scrub resistance is determined by weight loss of the paint film relative to a standard calibration panel. The test panel and calibration panel are scrubbed simultaneously. The scrubbing device is a ScotchBrite™ 7448 abrasive pad.
<b>ASTM D 4828</b> This test method determines the relative ease of removing soil and stains from interior coatings. The coating is applied to a black plastic panel and dried for seven days. The soilant can be user defined or the soilant described in ASTM D 3450 can also be used. A user defined liquid or powder cleaner is applied. The panel is scrubbed 100 cycles with a sponge. The soilant removal is assessed using gloss or color measurement.

## Accessoires

- BGD 1185 - Abrasion Heads for ISO 11998 (3M Scotch Brite handpads + Weights, total 135±1g)
- BGD 1186 - Abrasion Heads for ASTM D 2486 (Nylon + Weights, total weight is 450±10g)
- BGD 1187 - Abrasion Heads for ASTM D 3450 (Sponge+ Weights, total weight is 1,500g )
- BGD 1188 - Abrasion Heads for ASTM D 4213 (Sponge + 3M Scotch Brite handpads + Weights, total weigh is 470±10g)
- BGD 1189 - Abrasion Heads for ASTM D 4828 (Sponge + Weights, total weigh is 1000±10g )
- BGD 1364 - Special Nylon Brush (ASTM D 2486) 2 pcs/package
- BGD 1511 - Sponges (ASTM D 4213 & D 4828) - 12 pcs/package
- BGD 2208 - Black Plastic Panel (432x165x0.25mm) - pack of 100 units
- BGD 2355 - Brash Shim (165x12.7x0.25mm) - pack of 10 pairs
- BGD 1182 - Abrasion Heads for ASTM D 4752 (cheese cloth pad + weights, total weight is 1000±10g)
- BGD 1365-A - Hog Bristle Brush (DIN 53778) - 2 pcs/package

# **Multifunction Wet Abrasion Scrub Tester ('multi-standard')**

**BGD 528**

## **Disclaimer**

---

The information given in this sheet is not intended to be exhaustive and any person using the product for any purpose other than that specifically recommended in this sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at his own risk. Whilst we endeavour to ensure that all advice we give about the product (whether in this sheet or otherwise) is correct we have no control over either the quality or condition of the product or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing to do so, we do not accept any liability whatsoever or howsoever arising for the performance of the product or for any loss or damage (other than death or personal injury resulting from our negligence) arising out of the use of the product. The information contained in this sheet is liable to modification from time to time in the light of experience and our policy of continuous product development