



## Smartindale Martindale Abrasion & Pilling Tester

The Smartindale Martindale Abrasion&Pilling Tester is designed to determine the abrasion and pilling of various textiles.

A circular specimen is placed on the grinding head and under the prescribed pressure, in planar contact with a standard woolen abrasive fixed on the grinding table and rubbed in a multi-directional translation according to the LISSAJOUS trajectory (a composite trajectory of two mutually perpendicular resonant motions) until the specimen is ground to a prescribed number of times and the instrument stops automatically. Then the degree of abrasion or pilling is compared with the standard parameters and the result is obtained. It can test the abrasion resistance and pilling performance of cotton, hemp, silk woven fabrics and other textiles, membrane materials, knitted fabrics, woolen textiles, artificial leather, synthetic leather, gloves, labor protection materials, etc.

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- The original digital drive , achieve a higher level of test accuracy**  
 Smartindale replaced the traditional analog drive with a digital drive, an exclusive innovation in the industry, the combination of dual servo motors, microcontroller, embedded, mathematical model, point-to-point drive, etc., single point directly generated LISSAJOUS, with higher precision and reliability of the equipment.
- Calibration-free**  
 The dual action of servo driver and position sensor allows the instrument to continuously achieve accurate testing.
- Smart instrument**  
 Can be connected through Wi-Fi with SmarTexLab App installed in the smart phones, set parameters, monitor the test status, receive equipment warning reminders, replenishment reminders, etc., and share test results with one click.
- One-click testing modes shifting**  
 Compared to conventional Martindale, with the Smartindale, you don't need to remove the top plate and change the pins, just click one key of the screen to switch the testing modes from abrasion to pilling (e.g. straight line mode, large Lissajous figure, small Lissajous figure).
- Ergonomic design**  
 The moving guide plate can be operated by one hand and automatically closes, with anti-collision function, more friendly to testers.
- Reliable Test**  
 The excellent manufacturing accuracy of machining and assembly makes the abrading table and specimen holder are highly parallel to each other during running, and the specimen holder has a small runout to the surface of the abrading table (less than 0.05mm), which is more conducive to obtaining reliable test results.



**Power**  
230V 50/60Hz 5A



**Weight**



**Dimension**  
510\*850\*300mm (D\*W\*H)

## Specifications

Abrasion test	
Max stroke of movement	60.5+/-0.5mm
Weight of holder and spindle	198+/-2g
Pilling test	
Max stroke of movement	24+/-0.5mm
Weight of holder and spindle	155+/-1g

## Accessories

Fuse tube	2 pcs
Foam wool	9 pcs Ø38mm
Wool felt	18 pcs Ø90mm, Ø140mm
Wool abrasive	9 pcs Ø140mm
Sampling plate	3 pcs Ø38mm, Ø90mm, Ø140mm
Sampler	1 pc for pilling test
Sampler	1 pc for abrasion resistance test
Press	1 pc Ø126mm, 2.5kg
Fixture1	9 sets for pilling test
Fixture 2	9 sets for abrasion test
Weight 1	9 sets 12Kpa
Weight 2	9 sets 9Kpa
Rubber ring	9 pcs for pilling test
Test pen	1 pc
Connection shaft	9 pcs for pilling test
Connection shaft	9 pcs for abrasion test
Stainless steel ring	9 pcs 260g

## Optional Accessories

EMPA990 rating chart card	1 set knitted + Woven
SM50 rating chart card	1 set IWS + ASTM
SM25 abrasion resistant wool cloth	1 pack 1.6 X 5m/pack
SM26 woven wool felt	1 box 24 pcs/box Ø140mm
SM26 woven wool felt	1 box 24 pcs/box Ø90 mm
SM28 polyurethane ether foam	1box 250 X 200mm/pc, 25pcs/box

## Standards

ISO 12945-2-2020 ISO12947-2-2016 ISO12947-1-1998  
 ISO12947-3-1998 ISO12947-4-1998  
 GB/T 21196.1-2007 GB/T 21196.2-2007 GB/T 21196.3-2007  
 GB/T 21196.4-2007 GB/T 4802.2-2008 BS EN 530-2010  
 ASTM D4970/4970M-22 ASTM D4966-22

## Optional Standard

BS EN 388-2016+A1-2018 SATRATM31 A/B PUMA  
 BS EN 16094-2012 ISO 20344-2021 Item 6.12  
 BS EN 13520-2002 ISO 5470-2-2021