



Martindale Abrasion & Pilling Tester

The Unidale Martindale Abrasion and Pilling Tester is stable and reliable. The instrument has various running trajectories and stations. Measuring speed is optional. It has a butterfly guide plate design. It's lightweight, space-saving, and easy to observe the test status. Its precision design features an aluminum alloy with a hard, oxidized surface. It's both well-designed and durable. It can test the abrasion resistance and pilling of cotton, linen, and silk woven fabrics. It also works for other textiles, membrane materials, knitted fabrics, woolen fabrics, artificial leather, synthetic leather, gloves, and labor protection materials.



# **Unidale**

# Martindale Abrasion & Pilling Tester



#### Smart Abrasion and Pilling Test

The instrument connects to the SmarTexLab APP via IoT on a smartphone or computer. It then connects to ERP/LIMS through an API. The instrument can also connect directly to ERP/LIMS. Test sample information, test process and results can be uploaded to the system and summarized with other tests to output reports. You can communicate with ChiuVention customer service personnel online to get support quickly; receive reminders of instrument calibration, maintenance, and replacement of consumables; and perform OTA remote upgrades on a regular basis.

#### Stable running, reliable test results

The fixture rotates flexibly and the grinding table and specimen fixture is highly parallel. The machine and the surface of the grinding table have a very low vibration (less than 0.05mm),so those are more conducive to achieving reliable test results.

### 3 kinds of running trajectories, 3 kinds of test stations, and 3 kinds of speeds, to meet a variety of requirements.

It is equipped with 3 kinds of trajectories, one is straight line trajectory, the other two are Lissajous curve, 24mmx24mm (pilling test), 60.5mmx60.5mm (abrasion test), and you have a wide selection of test stations: 9, 6, 4 stations, and 3 speeds, slow (24rpm), standard(47.5rpm), and fast (75rpm), which can be adapted to a wide range of test methods and standards.

#### Light design, easy to use

Unique butterfly-shaped guide plate, lightweight and spacesaving, so it is easy for you to change accessories and observe the test status.

In addition, the machine is durable with precise design and aluminum alloy hard oxidation surface; the trapezoidal chassis is more stable, seven-inch color touch screen is easy to use.

#### The Specification of Unidale

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



#### **Power**

220/110V 50/60Hz



#### **Neight**

9 work-station type 90kg(net) 147kg(packed) 4-6 work-station type 75kg(net) 110kg(packed)



#### **Dimension**

9 work-station type

Machine 850\*600\*340mm(L\*W\*H)
Machine+Accessories 990\*840\*770mm(L\*W\*H)

4-6 work-station type

Machine 710\*530\*340mm(L\*W\*H) Machine+Accessories 840\*720\*640mm(L\*W\*H) (The machine is 9 work -station type, 4-6 type appearances are different)

#### Accessories

(Note: 4-6-9, 8-12-18 refers to the number of accessories for the 4-6-9 work station type separately.)

Fuse tube	2pcs
Foam wool	4-6-9 pcs Φ38 mm
Wool felt	8-12-18 pcs Ф90 mm, Ф140 mm
Wool abrasive	4-6-9 pcs Φ140 mm
Sampling plate	3 pcs Φ38 mm, Φ90 mm, Φ140 mm
Sampler	1 pc for pilling test
Sampler	1 pc for abrasion test
Press	1 pc Φ126mm,2.5kg
Fixture1	4-6-9 sets for pilling test
Fixture 2	4-6-9 sets for abrasion test
Weight 1	4-6-9 sets 12Kpa
Weight 2	4-6-9 sets 9Kpa
Rubber ring	4-6-9 pcs
Test pen	1pc
Connection shaft	4-6-9 pcs for pilling test
Connection shaft	4-6-9 pcs for abrasion test
Stainless steel ring	4-6-9 pcs 260g

# **Optional Accessories**

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 Φ140mm
Sm26 woven wool felt	1 box 24 pcs/box Φ90 mm
SM28 polyurethane ether	
foam	1box 250 X 200mm/pc, 25pcs/box

# Standards

ISO 12945-2-2020 ISO12947-1-1998 ISO12947-2-2016 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 Standards**

BS EN 388-2016+A1-2018 Protective gloves for mechanical hazards; SATRATM31 A/B Abrasion Resistance Test for Leather;

PUMA; BS EN 16094-2012 Laminated wood flooring,

Test method for the determination of micro-scratches;

ISO 20344-2021 Item 6.12 Personal protective equipment,

Test methods for footwear and boots;

BS EN 13520-2002 Test methods for footwear, uppers,

linings and insoles, abrasion resistance;

ISO 5470-2-2021 Rubber or plastic coated fabrics,

determination of abrasion resistance



