

Chemo-mechanical Hand Abrasion

Basic functions

Soft chemo-mechanical hand-abrasion test acc. to:

- DIN EN 60068-2-70 / IEC 68-2-70
- BMW GS 97034 / GS 97045
- Daimler DBL 7384
- Ford WSS-M2P188-A1

as well as further company standards.

Damage to a printed or coated surface by the human hand is one of the main reasons for the sustained disturbance of a product's valence. ABREX offers the possibility to simulate in advance on the finished product the high-complex viscoelastic process of hand abrasion and its chemical environment.

Advantages:

- **Reproducible results** due to standardised test procedure
- **Practice-oriented testing** by chemo-mechanical abrasion
- **Universal use** by flexible unit design



Technical data

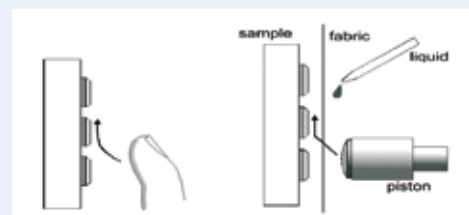
Normal load:	1, 5, 10 N (6/15/20 N optional)
Distance:	4 mm (up to 40 mm optional)
Number of cycles:	1 - 10 million
Fluid feed:	cyclic
Fabric feed:	cyclic
Power supply:	230 V, 50 Hz; 110 V, 60 Hz
Compressed air:	4 bar, external, oil free, water free

Test samples:



Mobile phone keypad

Leather



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Options

Adjustable test distance:

The friction distance can be adjusted between 4 and 40 mm.
Test frequency: 2 Hz at 4 mm,
0.5 Hz at 40 mm.



NailScratch 'Industrial':

Simulates the friction of a surface by human finger nail (e.g. printed, coated).



NailScratch 'Automotive':

Finger nail scratch test acc. to BMW test specification for groove stability.



Shoe sole test:

Abrasion test acc. to BMW test specification for testing the resistance against shoe soles.



Fingerprint test:

Affinity test of fingerprints and cleaning properties.



Consumables

Standard fabric:

Simulates human hand abrasion acc. to DIN EN 60068-2-70 / IEC 68-2-70.



Cotton-Batist fabric (Denim):

Simulates abrasion under contact with clothing materials (e.g. Jeans) acc. to ISO 105 D01.



Cotton-Lawn fabric:

Simulates abrasion under contact with fine-structured clothing materials (e.g. trouser pockets) acc. to ISO 105 F09.



Soiling behaviour:

Simulates the soiling of materials (by fats, soot) acc. to BMW GS 97034.



Abrasion-Pad S-1000:

Simulates high-abrasive mechanical wear.



Abrasion-Pad 'Scrub test':

Simulates the mechanical wear by scouring (M44).



Wool felt H1:

Abrasion test acc. to various standards, hardness H1.



Artificial sweat acc. to:

DIN 53160-2:2001
BMW GS 97045-2
DBL 73084
VW TL 226

Further fluids:

Cleaning pastes,
Lotions,
Polishing pastes,
etc.