

## ABRASION RESISTANCE ACCORDING TO MARTINDALE

### Rapid testing of abrasion and wear of technical textiles

#### TASK

Technical textiles such as seat covers are subject to a high degree of wear due to friction and abrasion. This can lead to undesirable color changes or even damage to the fabric. For this reason, wear tests are planned for such components as part of the initial sample approval test. Passing these tests ensures that no negative changes occur during the vehicle's service life. In order to be able to detect possible changes without long running tests, it is necessary to simulate the wear in a timely manner and then examine the abraded samples for visual changes

#### SOLUTION

A Martindale test device is used to simulate the abrasion and wear of technical textiles. The abrasion resistance test is carried out in accordance with DIN EN ISO 12947, on which common automotive standards such as BMW GS 97034-6 procedure B or VW 50105 are based. Here, the locked flat sample is stressed by a friction fabric under defined parameters (pressure, movement, frequency, medium) over a defined period of time.

#### Industries

Automotive supplier  
Textile

#### Analysis objectives

Initial sample release  
test Check against  
abrasion and wear

#### Materials

Fabric Prefabricated  
plastic parts  
Painted components

#### Analysis method

Martindale

#### Supplementary methods

Color measurement  
Grey scale ABREX  
Crockmeter Taber



## **EVALUATION**

After stressing, the evaluation is carried out in accordance with the specified standards. As a rule, the gray scale is also evaluated in accordance with DIN EN 20105-A02 and DIN EN 20105-A03.

## **ADVANTAGE**

Abrasion and wear devices make it possible to investigate the wear of technical textiles in the laboratory. In addition, simultaneous exposure to media can simulate their influence on abrasion and wear behavior over time. The results of these tests can be used to assess the suitability and quality of materials

