



RESISTANCE TO SIMULATED SEAT ABRASION

Application

This test method determines the seat wear on automotive seat leather and vinyl.

This test uses a belt platform to rub duck cloth material against a test specimen under a fixed weight. The belt abrades the sample at 60 cycles per minute. One backward and forward motion of the duck cloth is considered as one cycle.

Apparatus and Materials Required

1. Simulated Seat Wear Tester: (Seat Belt Abrasion Tester)

The simulated seat wear tester is modified to hold the test material to the rubbing platform. The counterbalance weight is 2.352 kg +/- 5 g, and a 250 mm stroke length. Sample holders are 40 mm in diameter

Source: Schap Specialty Machine, Inc.
17309 Taft Road
Spring Lake, MI 49456
Phone (616) 846-6530
Fax: 616-846-6675
Email: info1@schapmachine.com

2. Double-Sided Tape: Strong enough to stop the test sample from moving.

3. #8 Greige Cotton Duck Cloth: Bleached Cotton style #8 50mm wide rolls.

Source: Test Fabrics, Inc.
PO Box 3026
415 Delaware Ave
West Pittston, PA 18643 USA
Phone: (570) 603 0432
Fax: (570) 603 0433
Email: info@testfabrics.com or testfabrics@aol.com
www.testfabrics.com

Chemicals, materials, parts, and equipment referenced in this document must be used and handled properly. Each party is responsible for determining proper use and handling in its facilities.

Date	Action	Revisions	Rev. 0
2018 05 22	Released		



Conditioning and Test Conditions

All test values indicated herein are based on material conditioned in a controlled atmosphere of 23 +/- 2 °C and 50 +/- 5% relative humidity for not less than 24 h prior to testing and tested under the same conditions unless otherwise specified.

Procedure

Duck Cloth Belt Preparation

1. Measure and cut the duck cloth to length. (1.1 Meter long)
2. Cut and remove excess material, leaving a tongue of 25 mm x 30 mm at one end. (See Figure 1)
3. Place the tongue into the weight and tighten the two screws. (See Figure 2)
4. Take the other end of the cloth and fold it back on itself by approximately 150 mm.
5. Thread the double-sided cloth through the back end of the buckle, over the top of the center bar, and back through the buckle and pull through. This will create a large loop. (See Figure 3)
6. Now place the remainder of the cloth back through the buckle and pull tight. This will secure the loop and stop it from slipping. (See Figure 4)

Sample Holder Preparation

1. Ensure the sample holders are clean of all debris / double-sided tape. (See Figure 5)
2. Cut out a blank test specimen 120 mm x 60 mm. (See Figure 6)
3. Cover the B surface / back side of the material with double-sided tape
4. Peel the remaining backing of the double-sided tape and stick the material to the holder, keeping the material tight as doing so. Make sure you do not cover the holes on the holder. (See Figure 7)
5. Place the plate over the holes and tighten the screws.
6. Load the sample into the machine, with the tightened screws pointing down. (See Figure 8)

Machine Operation & Testing

1. With the sample holder in the machine, take the assembled belt and place the loop around the mandrel and tighten. This will stop the loop slipping from the mandrel. (See Figure 9)
2. Lay the belt over the material sample and place the weight into the clear tube. (See Figure 10)

3. Press start on the machine, ensuring the weight does not bottom out at the base of the machine. If so, adjust the loop accordingly around the mandrel.
4. Set the machine to the required cycles, and check the stroke arm is set to 250 mm
5. Start the machine, ensuring the machine is running smoothly.
6. After the end of the test cycle, remove the test specimen from the machine and then the holder.

Evaluation

Lay the test specimen holder on a flat surface and examine the A surface of leather / vinyl for wear through. Report the result as evidence of wear through or no wear through, see Figures 11 and 12 for examples.

Notes :- This method was written around the Schap 2-station seat belt wear machine. If a different machine apparatus is used, adjustments and mounting procedure may be required.

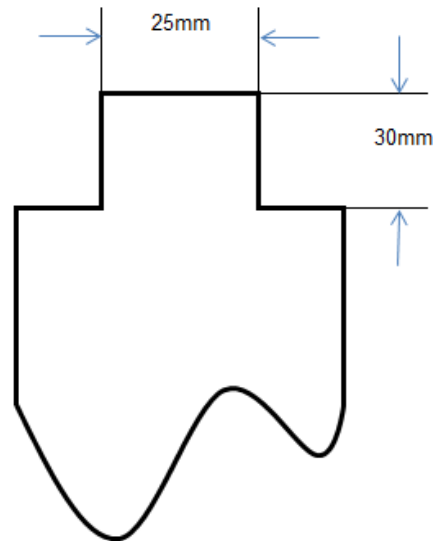


Figure 1 – Duck Cloth Cut Out