

**RESISTANCE TO SIMULATED FINGER TIP ABRASION****Application**

This procedure is used to determine the resistance to simulated finger tip abrasion of coated surfaces.

Apparatus/Material Required**Equipment**

Abrex Testing Equipment or equivalent

Available from:
INNOWEP GmbH
D97070 Würzburg
Phone: 49.931.32.2980

AATCC Gray Scale according to AATCC Evaluation Procedure 1/ISO 105-A02 for evaluation of color change.

Available from:

AATCC
P.O. Box 12215
Research Triangle Park, North Carolina 27709 U.S.A.

and

British Standards Institution
3 York Street
Manchester M2 2AT
United Kingdom

Material

Abrex Abrasion Cloth – ABR2050-1

Available from:
Metron Instruments - U.S.A. Representative
P.O. Box 39325
Solon, Ohio 44139 U.S.A.
Phone: 216.33.20592

Equipment Calibration

Calibration is performed as recommended by the equipment manufacturer.

Date	Action	Revisions	Ver. 3
2008 10 07	Revised	Changed the red and green text to black	J. Crist, FNA
2006 09 29	Revised	Equip Set Up #3, Test Proc 1 & 2 & Eval & Reporting; Added 4 & 5 in Equip Set Up (changes in red)	
2006 03 14	Activated		



Sample Preparation and Conditioning

Sample Preparation

Evaluate the sample for dirt or defects on the surface. If either is visible circle the area and test in a clean area.

Sample Conditioning

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.

Note: Production parts shall be tested unless otherwise mutually agreed upon by Materials Engineering and the design activity.

Equipment Set Up

1. Use a 5 N load or as specified in the SDS requirement or Material Specification.
2. Set machine to stop after the strokes specified in the Material Specification.
3. Advance abrasion cloth 0.2 seconds every 5,000 strokes.
4. Test Piston with a 44 Shore A hardness.
5. Abrasion path of 25-30 mm length and 8-10 mm width.

Test Procedure

1. Place sample in the sample stage of the Abrex machine and secure. Pull out the piston completely and move the stage in the direction of the test piston until the test sample and the piston face each other. Align the sample so that the tested surface is approximately 3-5 mm beneath the piston.
2. Place the abrasion cloth in front of the piston to ensure cloth is aligned with test piston.
3. Adjust the stage to correctly position the sample and set the abrasion path.
4. Set the machine to stop after the cycles specified in the specification requirement.
5. Start the machine.

Note: Periodic inspection of the sample is recommended to detect failures before all the required cycles have completed. Recommended interval is every 10,000 cycles.

Evaluation and Reporting

Report original film thickness using ASTM B 487 or other mutually agreed upon method.

Evaluate the abraded area for wear through to substrate and report if present.

For metallic paint, rate and report the initial and final color (AATCC gray scale, ISO 105-A02 procedure 1) initial gloss and paint film thickness. Paint film thickness must meet specification requirements.

For pad printed parts graphics must be readable after testing. The number of hits must be reported and represent production process

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.