Ford Motor Company

FORD LABORATORY TEST METHOD EU BN 053-02

DETERMINATION OF THE WATER VAPOUR TRANSMISSION OF SEAT COVER MATERIAL

Application

This method is used to determine the water vapour transmission of seat cover materials.

Apparatus and Materials Required

Humidity Cabinet

Capable of maintaining a constant relative humidity of 85 +/- 2 % at 20 +/-1 °C. The air current convection speed in the cabinet must be a minimum of 2.5 m/second over the sample surface.

Test Cell

Made from aluminum - dimensions see drawing.

Analytical Balance

Accuracy +/- 0.1 mg

Silica Gel

Drying medium - must be regenerated before each test.

Wax

For sealing test cell - type 192a, or Plasticized Paraffin Wax.

Source:

Mobil Oil Co.
Pegasus House, Sackville Street
London W.1

or

Mobil Oil AG, Special Dept.
Hamburg 1, Steinstr 5
Germany

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.

Date	Action	Revisions
2001 09 17	Revised	Editorial – no technical change A. Cockman
1994 02 28		

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Procedure

1. Cut a test specimen 96 mm diameter from the sample.
2. Fill the test cell with silica gel to approximately 3 mm below the specimen.
3. Place the specimen on the test cell and cover it with the ring.
4. Seal the ring and the cell wall with wax and allow to harden.
5. Weigh the assembly to an accuracy of 0.001 g and record the weight.
6. Place the assembly in the humidity cabinet maintained at 85 +/- 2 % relative humidity and 20 +/- 1 °C. Remove and weigh every 24 hours to an accuracy of 0.001 g.
7. Continue to check assembly weight every 24 hours until 3 consecutive weighings show the same increase.

Evaluation

Calculate the water vapour transmission as follows:

$$\text{Water Vapour Transmission} = \frac{W \times 10.000}{50} \text{ g/sq metre/24 hours.}$$

Where: W = Weight increase between the last two weighings in g.

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.

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