

TEAR RESISTANCE AND RECOVERY OF MOLDED FIBER PADS

Application

This test method is used to determine the ability of a molded fiber pad to retain shape and resist tearing after severe deformation and/or crushing.

Method "A": Determination of spring-back after deformation and observance of any tearing or cracking of the fiber pad.

Method "B": Determination of recovery after crushing.

Apparatus and Materials Required

Test Fixtures - for Methods A and B; refer to Figures 1 and 2.

Molded Test Form - Refer to Figure 3 for dimensions.

Molded Test Sample

Refer to Figure 3 for dimensions and the applicable Engineering Material Specification for thickness.

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

Method "A"

1. Mold the fiber pad to the dimensions shown in Figure 3, or as specified in the applicable Engineering Material Specification.
2. Clamp the molded fiber pad into the fixture, shown in Figure 1.

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3. Place the 80 x 115 mm plate onto the sample and add weight without impact loading to total 15 kg, or as specified in the applicable Engineering Material Specification. The test sample should be forced inside out.
4. Remove the weights, plate, and sample from the fixture.
5. Repeat steps 2, 3, and 4 using the inverted sample.
6. Examine the sample for cracking and tearing, especially at the corners. Report as specified in the Engineering Material Specification.

Method "B"

1. Place the sample into the flat surface shown in Figure 2.
2. Measure the height of the top surface of the sample from the flat surface (T1).
3. Place the 300 x 300 mm plate on top of the sample and add weights to total 75 kg, or as specified in the applicable Engineering Material Specification.
4. Maintain the load for two hours, remove weights and plate, and allow to recover for 5 minutes.
5. Measure the height of the top surface (T2).
6. Calculate and report the percent recovery:

$$\text{percent recovery} = \frac{T2}{T1} \times 100$$

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.