



Downproofness - International Rotating Box

Brief Test Description

(Adapted from obsolete FTMS 191-5530)

1. Description of Test Apparatus

The tumbler is a 45.5 centimeter plastic box with door on one side. A motor rotates the box at a speed of 48 ± 2 revolutions per minute. Twenty-four No. 6.5 solid silicone stoppers are used in the box.

2. Sample Pillow Specifications

| | |
|-------------------------------|---|
| Finished Size of Test Pillow: | 20 cm X 30 cm |
| Seam Style: | "SSe" (from ASTM D6193). Also known as a "French seam." |
| Stitch Length: | Approx. 5 stitches/cm |
| Stitch Style: | "Type 301" (from ASTM D6193) |
| Needle Size: | 90/14 |
| Thread: | 29 Tex |
| Mass of Fill Material: | 35 grams |
| Mixture of Fill Material: | Specified by customer |

3. Testing Sample Pillow

- Clean test pillow is placed in clean tumbler box.
- Box rotates for 30 minutes.
- All fibers, feathers and clusters are collected from surface of pillow, tumbler box and silicone stoppers.
- Collected material is evaluated and counted.

4. Reporting of Results

The numerical rating (see *Chart 1*) is based upon the amount of fibers, down, and/or feathers that escaped or are protruding through the fabric after the 30 minute tumbling period. *Note: only fibers > 4 mm are counted.*

| Rating | Fibers (> 4 mm) | Feathers |
|--------|-----------------|------------------|
| 5 | <5 | 1 small (<15 mm) |
| 4 | 6 – 10 | 2 |
| 3 | 11 – 20 | 3 – 4 |
| 2 | 21 – 30 | 5 – 7 |
| 1 | >31 | >8 |

Chart 1. Downproof rating scale. Based on the number of fibers and feathers escaped.

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www.idfl.com

IDFL

Tel: +1 801 467 7611
email: info@idfl.com

IDFL EUROPE

Tel: +41 52 765 1574
email: europe@idfl.com

IDFL CHINA

Tel: +86 571 8273 6561
email: china@idfl.com

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