

SEAM FATIGUE TESTING**Application**

This test method is used to determine the ability of fabric or vinyl/polymeric film coated seating fabric to resist tearing or needle hole elongation of a sewn seam under cyclic loading when evaluated per this test procedure.

Apparatus and Materials Required**Sewing Machine**

Capable of producing a lock stitched seam as described under Procedure, Para. 2.

Singer 211 U566

or

Juki lock stitch industrial type

Source: Singer Sewing Machine Co. Ltd.
415 Bonhill Street
London E.C.2

Source: M. J. Foley Company
16580 Eastland
Roseville, MI 48066
Phone (313) 779-5050
Fax (313) 776-1278

Needle

Type 180/24 (1.8 mm dia, set R (round point)) - unless otherwise specified in the Engineering Material Specification.

Source: Singer Sewing Machine Co. Ltd
See above

or

M. J. Foley Company

or

Eurosew Ltd.
7 Stafford Place
Moulton Park Ind. Estate
Northampton
Northamptonshire
NN3 1NN

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or

Ferd. Schmetz GmbH
512 Herzogenrath, Merkensteinerstrasse 53
Germany

or

Approved alternative

Thread

WSD-M15H51D and E respectively or equivalent, for top and bottom, unless otherwise specified in the Engineering Material Specification.

Seam Fatigue Tester

Model ATD-2

Source: Ogawa Seiki Co. LTD
Tokyo Central P.O. Box 1618
Tel. Tokyo 03-3367-8211
Fax. Tokyo 03-3367-8581.8582

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

1. Evaluate 5 warp and 5 fill test specimens for source approval (the warp specimen is sewn on the fill edge and the fill specimen is sewn on the warp edge). For in process testing, evaluate the worse case direction only.
2. Cut out 2 pieces 100 x 100 mm for each test specimen, and sew 10 mm from each edge using 5 - 6 stitches/25.4 mm (Refer to figure 1). The ends of the sewn seam can be back stitched for approximately 10 mm to lock in the thread, if necessary. Cut each sewn piece 25 mm from each side for a length of 88 mm as shown in figure 1.
3. Place a clip-type clamp on each end of the test specimen (shaded area in figure 1). The space between the clip-type clamps clamped on the test specimen should be 140 mm. See figure 1. If test specimens elongate to more than 180 mm between the clamps during the test, they should be re-clamped to 140 mm spacing.