

DETERMINATION OF THREAD LOCKING ADHESIVE EFFICIENCY

Application

This method is used for the determination of the efficiency of liquid or pasty type thread locking adhesives.

Apparatus and Materials Required**Hexagonal Headed Bolts** (Plain)

M8 x 50 (see European Metric Standard Parts Manual Specification SB 100.01), unless otherwise specified.

Hexagon Nuts (Plain)

M8 (see European Metric Standard Parts Manual Specification SD 104.01), unless otherwise specified.

Ensure that the surface of the nuts and bolts are not contaminated by process lubricants, e.g. silicones or molybdenum disulphide.

Torque Wrench

Calibrated in Nm.

Mechanical Convection Oven

Capable of maintaining temperatures up to 120 +/- 2 °C.

Cold Box

Capable of maintaining a temperature of - 30 +/- 2 °C.

Degreasing Reagent**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
2000 11 14	Revised	Editorial – no technical change A. Cockman
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Procedure

- 1a. Vapour degrease 10 bolts and 20 nuts. Discard any pieces with evidence of thread damage and bolt-nut pairs being excessively tight or loose or sticking due to burrs.
- 1b. Precoated bolts and nuts must be vapour degreased (10 pieces).
- 2a. Dip the bolt threads into the material under test, ensure that the threads are completely covered and screw through a nut. Ensure that 2 courses of bolt thread are projecting. Immediately screw on a second nut with a torque of approximately 0.5 Nm.
- 2b. The second nut is not required when testing precoated bolts and nuts.
3. Immediately after completing Step 2, suspend the assembly vertically, with the nuts completely covered, in the specified medium for the required time and temperature (see Attachment 1).
4. Immediately after removing the assembly from the test medium, hold the bolt-head in a box clamp and release the second nut carefully and then determine the release torque for the first nut, using the torque wrench.

Evaluation

The release torque is defined as the maximum torque required to release the nut as indicated by the torque wrench.

Report the average value for the 10 nuts.

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.