SLOVENSKI STANDARD
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Aeronavtika - Kabelske spojke za vezalno pasovje - Preskusne metode - 307. del: Odpornost proti ultravijoliļ nemu sevanju

Aerospace series - Cable ties for harnesses - Test methods - Part 307: Resistance to ultra violet radiation

Luft- und Raumfahrt - Befestigungsbänder für Leitungsbündel - Prüfverfahren - Teil 307: UV-Beständigkeit

Série aérospatiale - Frettes de câblage pour harnais - Méthodes d'essais - Partie 307 : Résistance aux radiations des ultra-violet

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Aerospace series - Cable ties for harnesses - Test methods - Part 307: Resistance to ultra violet radiation

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Contents

Page

Foreword

This document (EN 4057-307:2006) has been prepared by the Aerospace and Defence Industries Association of Europe - Standardization (ASD-STAN).

After enquiries and votes carried out in accordance with the rules of this Association, this Standard has received the approval of the National Associations and the Official Services of the member countries of ASD, prior to its presentation to CEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by June 2007, and conflicting national standards shall be withdrawn at the latest by June 2007.

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1 Scope

This standard determines test methods for the resistance of cable ties for harnesses to the exposure to ultra violet radiation.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 4056-001, *Aerospace series — Cable ties for harnesses — Part 001: Technical specification*

ASTM G53-88, Standard practice for operating light and water-exposure apparatus (fluorescent UV-condensation type) for exposure of non metallic materials[1)]

3 Terms and definitions

For the purposes of this standard, the terms and definitions in EN 4056-001 shall apply.

4 Apparatus

The test apparatus shall be as specified in ASTM G53-88 Clause 6 using UV B tubes.

5 Preparation of specimen

Preparation of test pieces. Cut a length of the parallel portion of the cables tie, minimum length 75 mm. A minimum of 20 specimens are to be prepared.

Half the test specimens are to be mounted in holders such that the tie's outer surface will be exposed to the test environment. To provide rigidity, flexible specimens may be attached to a backing panel made of Aluminium or other non-corrosive heat conductive material.

The remaining test specimens are to be retained for later use.

1) Published by: American Society for Testing and Materials (ASTM), 1916 Race Street, Philadelphia, PA 19103.

6 Procedure

Mount the test specimen holders into the racks with the specimen outer surface facing the lamp. When the test specimens do not completely fill the racks. Fill the empty spaces with blank panels to maintain the test conditions within the chamber.

Program the selected test conditions as specified below

Test cycle

UV periods	8 h at (55 ± 3) °C
Humidity period	4 h at (40 ± 3) °C

After the completion of a 1 000 h cycling the specimens are to be removed from the chamber.

Both the exposed and unexposed samples shall be conditioned for 24 h in a chamber at (20 $^{+2}_{-1}$) °C with a relative humidity of (50 ± 5) %. Immediately upon removal from the chamber the specimens are to be stored in an airtight container and tested within 1 h.

After conditioning the specimens are to be tested on tensile test machine capable of measuring elongation to an accuracy of 1 %. The gauge length shall be (25 ± 1) mm and the jaw separation speed shall be (25 ± 2,5) mm/min.

The seven aged and seven not aged specimen are to be pulled and the average elongation at break for each group shall be calculated disregarding the highest and lowest figures. The percent change between aged and unaged groups shall then to be calculated.

7 Requirements

The maximum change in average elongation at break between the aged and not aged specimen groups shall be specified in the product standard.