SLOVENSKI STANDARD
SIST EN 4530-001:2009

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Aeronavtika - Tesnilne puġe za uporabo v veznih elementih - 001. del: Tehniļna specifikacija

Aerospace series - Sealing sleeves used in elements of connection - Part 001: Technical specification

Luft- und Raumfahrt - Dichtungshülsen zur Verwendung in Verbindungselementen - Teil 001: Technische Lieferbedingungen

Série aérospatiale - Manchons d'étanchéité utilisés dans les organes de connexion - Partie 001 : Spécification technique

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ICS:

49.060	Letalska in vesoljska elektriļna oprema in sistemi	Aerospace electric equipment and systems

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English Version

Aerospace series - Sealing sleeves used in elements of connection - Part 001: Technical specification

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This European Standard was approved by CEN on 20 February 2006.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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Foreword

This European Standard (EN 4530-001:2006) has been prepared by the European Association of Aerospace Manufacturers - Standardization (AECMA-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 AECMA, 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of an identical text or by endorsement, at the latest by November 2006, and conflicting national standards shall be withdrawn at the latest by November 2006.

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1 Scope

This standard specifies:

— the electrical, mechanical, environmental and dimensional characteristics of sealing sleeves used in elements of connection;

— the conditions for qualification if the sealing sleeves are not tested during the connector qualification, acceptance testing and quality assurance;

— the test programme and groups.

It is applicable to removable sealing sleeves used in connectors or in other elements of electrical connection.

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.

ISO 2859-1, *Sampling procedures for inspection by attributes — Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection.*

EN 2591-100*, *Aerospace series — Elements of electrical and optical connection — Test methods — Part 100: General.*

EN 9133, *Aerospace series — Quality management systems — Qualification procedure for aerospace standard parts.*

MIL-HDBK-454, *General Guidelines for Electronic Equipment.* 1)

3 Terms and definitions

For the purposes of this standard, the terms and definitions given in EN 2591-100 and the following apply.

3.1
sealing sleeve
device to prevent the ingress of contaminants and to facilitate the insertion and extraction of the contact

4 Conditions of use and temperature classes

The sealing sleeves specified shall be from one of the classes specified below:

— class P: maximum operating temperature 125 °C;

— class R: maximum operating temperature 150 °C;

— class S: maximum operating temperature 200 °C;

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* And all parts quoted in this standard.

1) Published by Department of Defense (DOD), the Pentagon, Washington, DC 20301, USA.

— class T: maximum operating temperature 260 °C;

— class U: maximum operating temperature 350 °C.

The minimum operating temperature shall be – 65 °C, unless otherwise specified in the product standard.

5 Design and description

Refer to the relevant product standard.

6 Dimensions and mass

The dimensions of the sealing sleeves and their mass are defined in the product standard.

7 Operation

The assembly procedure of the sealing sleeves is defined in the product standard.

8 Tests

See Table 1.

Table 1

EN 2591-	Test	Details
101	Visual examination	Initial examination: before and after wiring Details to be examined: — identification of materials in accordance with definition document; — identification; — aspect before and after wiring; — marking; — surface roughness.
102	Examination of dimensions and mass	In accordance with the product standard
201	Contact resistance - low level	Not applicable
202	Contact resistance at rated current	Not applicable
203	Electrical continuity at microvolt level	Not applicable
204	Discontinuity of contacts in the microsecond range	Not applicable
205	Housing (shell) electrical continuity	Not applicable
206	Measurement of insulation resistance	In accordance with the product standard
207	Voltage proof test	In accordance with the product standard
208	Temperature rise due to rated current	Not applicable

continued

Table 1 *(continued)*

EN 2591-	Test	Details
209	Current temperature derating	Not applicable
210	Electrical overload	Not applicable
211	Capacitance	Not applicable
212	Surface transfer impedance	Not applicable
213	Shielding effectiveness from 100 MHz to 1 GHz	Not applicable
214	Lightning strike, current and voltage pulse	Not applicable
216	Engagement of contacts	Not applicable
220	Contact/conductor joint ageing by current and temperature cycling	Not applicable
301	Endurance at temperature	Not applicable
302	Climatic sequence	Not applicable
303	Cold/low pressure and damp heat	Not applicable
304	Damp heat steady state	Not applicable
305	Rapid change of temperature	T_A = maximum temperature specified in the product standard T_B = minimum temperature specified in the product standard
306	Mould growth	Method A Duration: 28 d Nil growth No prior washing No surface etching
307	Salt mist	Test conditions in accordance with the product standard
308	Sand and dust	Not applicable
309	Dry heat	Not applicable
310	Cold	Not applicable
311	Low air pressure	Not applicable
312	Air leakage	Test conditions in accordance with the product standard
313	Driving rain (artificial)	Not applicable
314	Immersion at low air pressure	Test conditions in accordance with the product standard
315	Fluid resistance	Fluids and test conditions in accordance with the product standard
316	Ozone resistance	Test conditions in accordance with the product standard

continued

Table 1 *(continued)*

EN 2591-	Test	Details
317	Flammability	Test conditions in accordance with the product standard
318	Fire-resistance	Not applicable
319	Gastightness of solderless wrapped connections	Not applicable
320	Simulated solar radiation at ground level	Not applicable
321	Damp heat, cyclic test	Not applicable
322	Hermeticity	Not applicable
323	Thermal shock	Not applicable
324	Interfacial sealing	Not applicable
401	Acceleration, steady state	Not applicable
402	Shock	Not applicable
403	Sinusoidal and random vibration	Not applicable
404	Transverse load	Not applicable
405	Axial load	Not applicable
406	Mechanical endurance	Not applicable
407	Durability of contact retention system and seals	Not applicable
408	Mating and unmating forces	Not applicable
409	Contact retention in insert	Not applicable
410	Insert retention in housing (axial)	Not applicable
411	Insert retention in housing (torsional)	Not applicable
412	Contact insertion and extraction forces	Not applicable
413	Holding force of grounding spring system	Not applicable
414	Unmating of lanyard release connectors	Not applicable
415	Test probe damage (female contact)	Not applicable
416	Contact bending strength	Not applicable
417	Tensile strength (crimped connection)	Not applicable
418	Gauge insertion/extraction forces (female contacts)	Not applicable
419	Stability of male contacts in insert	Not applicable
420	Mechanical strength of rear accessories	Not applicable
421	Free fall	Not applicable
422	Locking wire hole strength	Not applicable
424	Stripping force, solderless wrapped connections	Not applicable

continued