SLOVENSKI STANDARD
SIST EN 2591-315:2001

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Aerospace series - Elements of electrical and optical connection - Test methods - Part 315: Fluid resistance

Aerospace series - Elements of electrical and optical connection - Test methods - Part 315: Fluid resistance

Luft- und Raumfahrt - Elektrische und optische Verbindungselemente - Prüfverfahren - Teil 315: Beständigkeit gegen Flüssigkeiten

Série aérospatiale - Organes de connexion électrique et optique - Méthodes d'essais - Partie 315: Résistance aux fluides

Ta slovenski standard je istoveten z: **EN 2591-315:1998**

ICS:

49.060	Letalska in vesoljska elektriļ na oprema in sistemi	Aerospace electric equipment and systems

SIST EN 2591-315:2001 **en**

EUROPEAN STANDARD
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English version

Aerospace series - Elements of electrical and optical connection - Test methods - Part 315: Fluid resistance

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Luft- und Raumfahrt - Elektrische und optische Verbindungselemente - Prüfverfahren - Teil 315: Beständigkeit gegen Flüssigkeiten

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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
EUROPÄISCHES KOMITEE FÜR NORMUNG

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

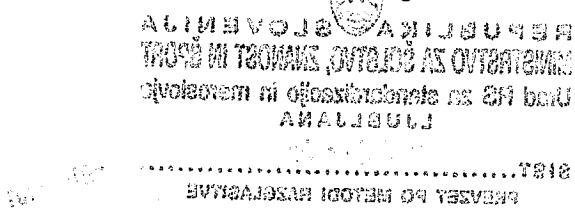
Foreword

This European Standard has been prepared by the European Association of Aerospace Manufacturers (AECMA).

After inquiries 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 December 1998, and conflicting national standards shall be withdrawn at the latest by December 1998.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.



1 Scope

This standard specifies a method of checking the resistance of elements of connection to fluids.

It shall be used together with EN 2591.

2 Normative references

This European Standard incorporates by dated or undated reference provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 2591	Aerospace series - Elements of electrical and optical connection - Test methods - General
EN 2591-101	Aerospace series - Elements of electrical and optical connection - Test methods - Part 101: Visual examination
EN 2591-206	Aerospace series - Elements of electrical and optical connection - Test methods - Part 206: Measurement of insulation resistance
EN 2591-408	Aerospace series - Elements of electrical and optical connection - Test methods - Part 408: Mating and unmating forces [1]
EN 2591-409	Aerospace series - Elements of electrical and optical connection - Test methods - Part 409: Contact retention in insert [1]
EN 3909	Aerospace series - Test fluids for electric components and sub-assemblies [1]

3 Preparation of specimens

3.1 Specimens shall be prepared according to the technical specification.

Unwired cavities shall be fitted with filler plugs.

3.2 Unless specified in the technical specification, the following details shall be stated:

- types of fluids;
- number of specimens, if different from one per fluid;
- mounting method, type of cable and definition of specimen wiring;
- number of cycles;
- temperature (T_1) and duration of the first phase;
- initial measurements (if applicable);
- method according to EN 2591-206 and insulation resistance value;
- temperature (T_2) and duration for the third phase;
- final measurements and requirements (if applicable).

1) Published as AECMA Prestandard at the date of publication of this standard

4 Method

4.1 Initial measurements (if applicable)

They shall be carried out as specified.

4.2 Procedure

Each specimen shall be subjected to only one of the specified fluids chosen from each of the following categories and preferably in accordance with EN 3909:

- fuels;
- hydraulic fluids;
  1) mineral
  2) synthetic
- liquid lubricants;
  1) mineral
  2) synthetic
- cleaning products;
- de-icing liquids;
- extinguishing liquids; (at an overpressure of 0,1 MPa)
- cooling liquids;
- greases.

Each cycle comprises three phases (see figure 1).

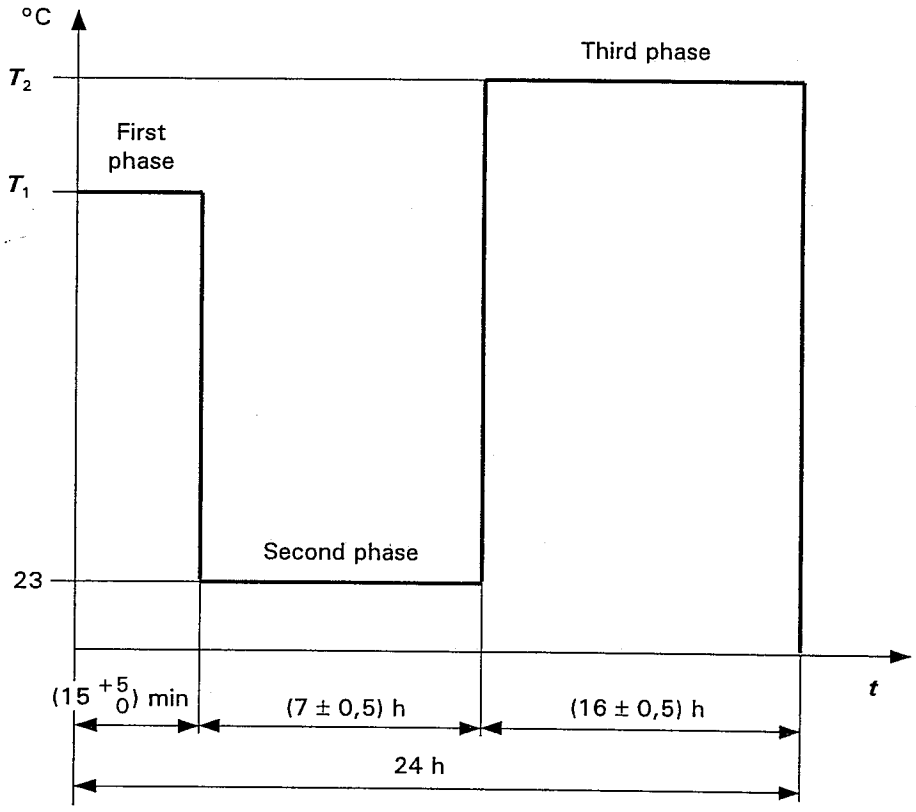


Figure 1 - Example of test cycle

4.2.1 First phase

4.2.1.1 Liquids: immersion

Specimens shall be unmated unless otherwise specified.

The specimens and the liquid shall be brought to the temperature specified (T_1).

Immerse the specimens for (15^{+5}_{0}) min, unless otherwise specified.

The temperature of the fluid shall not exceed the temperature limit of the specimens.

4.2.1.2 Greases: application

The specimens shall be mated unless otherwise specified.

The specimens and the grease shall be brought to the specified temperature (T_1).

The grease shall be spread in a fine film with a brush.

The specimens shall then be placed in an oven for (15^{+5}_{0}) min.

4.2.2 Second phase

4.2.2.1 Liquids

The specimens shall be removed from the liquid and stored at ambient conditions for (7 ± 0,5) h.

4.2.2.2 Greases

The specimens shall be stored at ambient conditions for (7 ± 0,5) h.

4.2.3 Third phase

The specimens shall be mated. In an oven the air of which is circulated and renewed, they shall be subjected to the specified temperature (T_2) for (16 ± 0,5) h, unless otherwise specified.

This temperature shall not be less than 65 °C.

NOTE: If the test is carried out at a temperature exceeding the flash point, appropriate safety measures shall be taken.

4.2.4 This cycle shall be repeated four times (five cycles in all) unless otherwise specified.

4.3 Final measurements and requirements (if applicable)

The specimens shall be subjected to the following test sequence:

- EN 2591-101: a discolouration is admissible;
- EN 2591-206: applicable to non-conducting fluids except for mated connectors in phase 1;
- EN 2591-408: specimens may be lubricated as specified;
- EN 2591-409.