SLOVENSKI STANDARD
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Aerospace series - Elements of electrical and optical connection - Test methods - Part 309: Dry heat

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Luft- und Raumfahrt - Elektrische und optische Verbindungselemente - Prüfverfahren - Teil 309: Trockene Wärme

Série aérospatiale - Organes de connexion électrique et optique - Méthodes d'essais - Partie 309: Chaleur seche

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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of an identical text or by endorsement, at the latest by April 1998, and conflicting national standards shall be withdrawn at the latest by April 1998.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 assessing the ability of elements of connection to function in dry heat conditions.

It shall be used together with EN 2591.

This method forms part of the test EN 2591-302.

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 2591-206	Aerospace series - Elements of electrical and optical connection - Test methods - Part 206: Measurement of insulation resistance
EN 2591-302	Aerospace series - Elements of electrical and optical connection - Test methods - Part 302: Climatic sequence [1]

3 Preparation of specimens

3.1 Specimens shall be prepared according to the technical specification.

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

- specimens mated or unmated and fitted with protective covers (if applicable);
- mounting method, type of cable and definition of wiring of specimen;
- type of preconditioning (if applicable);
- initial measurements (if applicable);
- severity (see 5.3);
- final measurements and requirements;
- measurement method according to EN 2591-206 and insulation resistance value.

4 Apparatus

The test chamber shall be designed so that the temperature is controlled by sensing devices located at those locations where the specimens are installed.

The absolute humidity shall not exceed 20 g of water vapour per cubic metre of air (i.e. approximately 50 % relative humidity at 35 °C). When the test is carried out at a temperature lower than 35 °C, the relative humidity shall not exceed 50 %.

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

5 Method

5.1 Preconditioning

Preconditioning shall take at least 1 h unless otherwise specified.

If required, the specimens shall be mated and unmated the specified number of times before testing.

5.2 Initial measurements (if applicable)

They shall be carried out as specified.

5.3 Severity

The severity, defined by the temperature and exposure time, shall be selected from those listed below.

5.3.1 Temperature

- (350 ± 5) °C
- (260 ± 5) °C
- (200 ± 2) °C
- (175 ± 2) °C
- (155 ± 2) °C
- (125 ± 2) °C
- (85 ± 2) °C

5.3.2 Exposure time

16 h

5.4 Procedure

When the test chamber is at the temperature corresponding to the specified severity, the specimens shall be introduced and connected to the measuring instruments.

Exposure time shall be calculated from the moment the chamber has reached thermal stability.

5.5 Final measurements and requirements

On completion of exposure time, while the specimens are still at the high temperature and within 1 h, the insulation resistance shall be measured (EN 2591-206). Its value shall not be less than that specified.