
Classification of environmental conditions - Part 2: Environmental conditions
appearing in nature - Fauna and flora

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CLASSIFICATION OF ENVIRONMENTAL CONDITIONS
PART 2: ENVIRONMENTAL CONDITIONS APPEARING
IN NATURE - FAUNA AND FLORA

Classification des conditions
d'environnement
Deuxième partie: Conditions
d'environnement présentes dans
la nature - Faune et flore

Klassifizierung von
Umweltbedingungen
Teil 2: Natürliche Einflüsse -
Fauna und Flora

BODY OF THE HD

The Harmonization Document consists of:

- IEC 721-2-7 (1987) ed 1; IEC/TC 75, not appended

This Harmonization Document was approved by CENELEC on 1989-12-05.

The English and French versions of this Harmonization Document are provided by the text of the IEC publication and the German version is the official translation of the IEC text.

According to the CENELEC Internal Regulations the CENELEC member National Committees are bound:

to announce the existence of this Harmonization Document at national level by or before 1990-03-01

to publish their new harmonized national standard by or before 1990-09-01

to withdraw all conflicting national standards by or before 1990-09-01.

Harmonized national standards are listed on the HD information sheet, which is available from the CENELEC National Committees or from the CENELEC Central Secretariat.

The CENELEC National Committees are the national electrotechnical committees of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxemburg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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**NORME
INTERNATIONALE
INTERNATIONAL
STANDARD**

**CEI
IEC**

721-2-7

Première édition
First edition
1987

Classification des conditions d'environnement

Deuxième partie:

Conditions d'environnement présentes
dans la nature – Faune et flore

iTeh STANDARD PREVIEW

(Classification of environmental conditions

Part 2:

Environmental conditions appearing
in nature – Fauna and flora

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Международная Электротехническая Комиссия

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

CLASSIFICATION OF ENVIRONMENTAL CONDITIONSPart 2: Environmental conditions appearing in natureFauna and flora

FOREWORD

- 1) The formal decisions or agreements of the IEC on technical matters, prepared by Technical Committees on which all the National Committees having a special interest therein are represented, express, as nearly as possible, an international consensus of opinion on the subjects dealt with.
- 2) They have the form of recommendations for international use and they are accepted by the National Committees in that sense.
- 3) In order to promote international unification, the IEC expresses the wish that all National Committees should adopt the text of the IEC recommendation for their national rules in so far as national conditions will permit. Any divergence between the IEC recommendation and the corresponding national rules should, as far as possible, be clearly indicated in the latter.

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PREFACE

This standard has been prepared by IEC Technical Committee No. 75: Classification of environmental conditions.

The text of this standard is based on the following documents:

[https://standards.iteh.ai/catalog/standards/sist/25112f0e-01c8-4c0a-b358-](https://standards.iteh.ai/catalog/standards/sist/25112f0e-01c8-4c0a-b358-d72505e66d24/sist-td-478-2-7-01-2002)

Six Months' Rule	Report on Voting
75(C0)34	75(C0)40

Full information on the voting for the approval of this standard can be found in the Voting Report indicated in the above table.

It should be noted that this standard forms part of a series intended to deal with the following subjects:

- Classification of Environmental Parameters and their Severities (Publication 721-1).
- Environmental Conditions Appearing in Nature (Publication 721-2).
- Classification of Groups of Environmental Parameters and their Severities. Introduction (Publication 721-3).

The following IEC publication is quoted in this standard:

Publication No. 721-1 (1981): Classification of Environmental Conditions.
Part 1: Classification of Environmental Parameters and their Severities.

CLASSIFICATION OF ENVIRONMENTAL CONDITIONS

Part 2: Environmental conditions appearing in nature

Fauna and flora

1. Scope

This part of the standard presents fauna and flora, including fungus, appearing in nature and describes influences emanating from these environmental parameters. It is intended to be used as part of the background information when selecting appropriate severities for product application.

When selecting severities of parameters related to fauna and flora for product application, the specifications given in IEC Publication 721-1 should be applied.

2. Object

To describe influences from fauna and flora to which products are liable to be exposed during storage, transportation and use.

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3. General

Fauna and flora can affect products in various ways, the most important of which are given in the following examples.

3.1 *Deterioration by mechanical forces*

The functioning of products may be affected by physical attacks of fauna and flora.

3.1.1 *Causes of deterioration*

The materials of products may be attacked by fauna, particularly by rodents and insects, by actions such as:

- feeding from material,
- gnawing at material,
- eating into material,
- chewing material,
- cutting holes into material.

Note.- Severe damage by termites is especially emphasized in this respect.

Among material susceptible to attack are natural materials such as wood, paper, leather, textiles, but also plastic materials including elastomers and even some metals such as tin and lead.

Another type of attack by all kinds of animals is brought about by actions such as:

- stroke or impact,
- thrust.

Attacks by flora, especially mould growth and detached parts of plants, can affect products by actions such as:

- overgrowth,
- thrust,
- impact.

3.1.2 *Kinds of damage*

The effects mentioned above may lead to the following damage:

- physical breakdown of material, parts, units, devices,
- mechanical deformation or compression,
- mechanical failure, for example of moving parts,
- surface deterioration,
- electrical failure by mechanical deterioration as above.

3.2 *Deterioration by deposits*

The functioning of products may be affected by deposits originating from fauna and flora. These surface deposits affect the products by chemical and mechanical reactions.

3.2.1 *Causes of deterioration*

Deposits from fauna, especially from insects, rodents, birds, etc., may consist of elements such as:

- presence of the animal itself,
- building of nests or settlements,
- feed stocks,
- metabolic products such as excrements, enzymes,

Deposits from all kinds of flora may consist of material such as:

- detached parts of plants (leaves, blossom, seeds, fruits, etc.),
- growth layers of cultures of moulds or bacteria and effects of their metabolic products.

3.2.2 *Kinds of damage*

The effects mentioned above may lead to the following damage:

- deterioration of material, corrosion, etc.,
- mechanical failure of moving parts,
- electrical failure due to:
 - increased conductivity of insulators,
 - failure of insulation,
 - increased contact resistance,
- electrolytic and ageing effects in the presence of humidity or chemical substances,
- moisture absorption and adsorption,
- decreased heat dissipation.

Note. - Two examples of damage by these effects are:
- interruption of electrical circuits,
- clouding of optical surfaces (including glass).

4. Occurrence of fauna and flora

With only few exceptions, fauna and flora may be present at all locations where products may be stored, transported or used.

While fauna may be the cause of damage inside buildings as well as at open-air locations, damage by flora will predominantly occur in open-air conditions. Moulds and bacteria may be present inside buildings and in open-air conditions.

The frequency of occurrence of fauna and flora with a possibility of damaging products depends very much on conditions of temperature and humidity. In geographical areas with warm damp climates, fauna and flora, especially insects and micro-organisms such as mould and bacteria, will find favourable conditions of life. However, humid or wet rooms in buildings, or rooms for processes producing humidity, are suitable living spaces for rodents, insects and micro-organisms.