Classification of environmental conditions - Part 2-2: Environmental conditions appearing in nature - Precipitation and wind (IEC 60721-2-2:2012)

EESTI STANDARDIKESKUS
ESTONIAN CENTRE FOR STANDARDISATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 60721-2-2:2013 sisaldab Euroopa standardi EN 60721-2-2:2013 ingliskeelset teksti.	This Estonian standard EVS-EN 60721-2-2:2013 consists of the English text of the European standard EN 60721-2-2:2013.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 02.08.2013.	Date of Availability of the European standard is 02.08.2013.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 19.040

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60721-2-2

August 2013

ICS 19.040

Supersedes HD 478.2.2 S1:1990

English version

Classification of environmental conditions - Part 2-2: Environmental conditions appearing in nature - Precipitation and wind

(IEC 60721-2-2:2012)

Classification des conditions d'environnement - Partie 2-2: Conditions d'environnement présentes dans la nature - Précipitations et vent (CEI 60721-2-2:2012)

Klassifizierung von Umgebungsbedingungen - Teil 2-2: Natürliche Umgebungsbedingungen - Niederschlag und Wind (IEC 60721-2-2:2012)

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Ref. No. EN 60721-2-2:2013 E

Foreword

The text of document 104/583/FDIS, future edition 2 of IEC 60721-2-2, prepared by IEC TC 104 "Environmental conditions, classification and methods of test" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60721-2-2:2013.

The following dates are fixed:

• latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2014-02-02
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2016-01-17

This document supersedes HD 478.2.2 S1:1990.

EN 60721-2-2:2013 includes the following significant technical changes with respect to HD 478.2.2 S1:1990:

– subclause Precipitation: simplified; data not possible to validate are removed;

– subclause Wind: text rewritten;

– Table 1 simplified and aligned with definition used by [1];

– subclause Hail: data added; formula changed; formula for impact energy added;

– subclause Snow: text changed and aligned with definitions used by [1];

– Table 3 removed;

– subclause Normal rain: text has been modified and numeric values removed;

– subclause Driving rain: text has been modified and numeric values removed;

– subclause Formation of ice: text has been modified and numeric values removed;

– subclause Drifting snow: text added;

– subclause Wind force: formula changed;

– Figures 1 to 5 removed.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

Endorsement notice

The text of the International Standard IEC 60721-2-2:2012 was approved by CENELEC as a European Standard without any modification.

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

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

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

Publication	Year	Title	EN/HD	Year
IEC 60721-1	-	Classification of environmental conditions - Part 1: Environmental parameters and their severities	EN 60721-1	-

CONTENTS

CLASSIFICATION OF ENVIRONMENTAL CONDITIONS –

Part 2-2: Environmental conditions appearing in nature – Precipitation and wind

1 Scope

This part of IEC 60721 presents fundamental properties, quantities for characterization, and a classification of environmental conditions dependent on precipitation and wind relevant for electrotechnical products.

It is intended to be used as background material when selecting appropriate severities of parameters related to precipitation and wind for product applications.

When selecting severities of parameters related to precipitation and wind for product application, the values given in IEC 60721-1 should be applied.

2 Normative references

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

IEC 60721-1, *Classification of environmental conditions – Part 1: Environmental parameters and their severities.*

3 Terms and definitions

Terms and definitions are defined, in context, throughout the present standard.

4 General

4.1 Introductory remark

The atmosphere of the Earth is in permanent motion. It is locally heated, cooled and moistened. The resulting gradients in density create high and low pressure areas. The equalizing winds do not blow directly from high to low pressure areas, but are deflected by Coriolis force due to the rotation of the Earth.

The continuous horizontal movement may cause slow upward motion over wide areas, or surface heating may give more localized updrafts in thermals. The air cannot maintain its water content in vaporous form if the reduction of pressure and temperature is sufficient, and precipitation may form. As an example, an air mass at +20 °C temperature is able to contain water in a quantity of 17,3 g/m^3 in vaporous form. If it cools to 0 °C the maximum water content is only 4,8 g/m^3.

4.2 Precipitation

The specific kind of precipitation (rain, hail or snow) is a result of complicated processes in the clouds.