Plastist torustiku- ja kanalisüsteemid. Plasttorud ja -liitmikud. Otsese (loomuliku) vanandamise meetod

Plastics piping and ducting systems - Plastics pipes and fittings - Method for exposure to direct (natural) weathering

EESTI STANDARDIKESKUS
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NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 1056:1999 sisaldab Euroopa standardi EN 1056:1996 ingliskeelset teksti.	This Estonian standard EVS-EN 1056:1999 consists of the English text of the European standard EN 1056:1996.
Standard on kinnitatud Eesti Standardikeskuse 23.11.1999 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.	This standard is ratified with the order of Estonian Centre for Standardisation dated 23.11.1999 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.
Standard on kättesaadav Eesti standardiorganisatsioonist.	The standard is available from Estonian standardisation organisation.

ICS 23.040.20, 23.040.45

ilmastikukindlus, materjalid, plasttorud, toruliitmikud, vanandamistestid

EUROPEAN STANDARD **EN 1056**

NORME EUROPÉENNE

EUROPÄISCHE NORM March 1996

ICS 23.040.20

Descriptors: plastic tubes, pipe fittings, ageing tests: materials, weather resistance

English version

Plastics piping and ducting systems - Plastics pipes and fittings - Method for exposure to direct (natural) weathering

Systèmes de canalisations et de gaines en plastiques - Tubes et raccords en plastiques - Méthode pour l'exposition directe aux intempéries

Kunststoff-Rohrleitungs- und Schutzrohrsysteme - Rohre und Formstücke aus Kunststoffen - Verfahren für die Bewitterung im Freien

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Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

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CEN

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

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Foreword

This European Standard has been prepared by Technical Committee CEN/TC 155 "Plastics piping systems and ducting systems", the secretariat of which is held by NNI.

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 September 1996, and conflicting national standards shall be withdrawn at the latest by September 1996.

This standard is based on ISO 877:1994 "Plastics - Methods of exposure to direct weathering, to weathering using glass-filtered daylight, and to intensified weathering by daylight using Fresnel mirrors", published by the International Organization for Standardization (ISO). It is a modification of those methods for reasons of applicability to plastics pipes and fittings and/or other test conditions and alignment with texts of other standards on test methods.

The modifications are:

- test conditions related to tropical exposures are omitted;
- requirements for test pieces are confined to those relevant to pipes and fittings;
- appropriate tolerances are introduced for the measurement of climatic data;
- a specific radiant energy dose is given for use for evaluating piping components which may be exposed during typical storage prior to installation;
- editorial changes have been introduced.

The material-dependent parameters and/or performance requirements are incorporated in the System Standard(s) concerned.

This standard is one of a series of standards on test methods which support System Standards for plastics piping systems and ducting systems.

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

Introduction

Outdoor-exposure tests of the type specified in this standard are needed to evaluate the performance of plastics piping components or materials when exposed to daylight. The results of such tests should be regarded only as an indication of the effect of exposure to direct weathering by the method described. Results obtained after exposure for a given time may not be comparable to those obtained after other exposures of equal time using the same method. When identical materials are exposed at different times for extended periods of several years, they generally show comparable behaviour after equal-exposure intervals. However, even in long-term tests, the results may be affected by the season in which the tests are started.

The results of short-term direct weathering tests can give an indication of the relative outdoor performance, but should not be used to predict the absolute long-term performance of a pipe, fitting or joint. Even results of tests carried out for longer than 24 months can show an effect of the season in which the exposure started. Comparisons of non-full-year exposure will exhibit seasonable effects.

The test method chosen is usually designed to expose the material to the most severe conditions associated with any particular climate. It should, therefore, be borne in mind that the severity of exposure in actual use is, in most cases, likely to be less than that specified in this standard, and allowance should be made accordingly when interpreting the results. For example, vertical exposure at 90° from the horizontal is considerably less severe in its effects on plastics than near-horizontal exposure, particularly in tropical regions, where the sun is most powerful at high zenith angles.

Polar-facing surfaces are much less likely to be degraded than equator-facing surfaces because they are less exposed to solar radiation. However, the fact that they may remain wet for longer periods may be of significance for materials affected by moisture.

1 Scope

This standard specifies a method for exposing plastics pipes and fittings, individually or assembled, or as pieces therefrom, by direct exposure to natural weathering in order to assess changes produced after specified weathering exposure stages relevant to European latitudes.

NOTE: For exposure appropriate to tropical or equatorial conditions, attention is drawn to ISO 877.

2 Normative references

This 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 standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

ISO 105-A02:1993	*Textiles - Tests for colour fastness - Part A02: Grey scale for assessing change in colour*
ISO 877:1994	*Plastics - Methods of exposure to direct weathering, to weathering using glass-filtered daylight, and to intensified weathering by daylight using Fresnel mirrors*
ISO 2818:1994	*Plastics - Preparation of test specimens by machining*
ISO 4582:1980	*Plastics - Determination of changes in colour and variations in properties after exposure to daylight under glass, natural weathering or artificial light*

3 Principle

Test pieces, comprising all or part of a pipe section, a fitting or a jointed assembly, are mounted on a rack under specified conditions and directly exposed to natural weathering until the rack has received a given minimum total solar radiant exposure per unit area .

Climatic conditions and variations and the radiation dosage during exposure are monitored and reported in accordance with the referenced standards.