Elektrilised kaablid ja optilised kiudkaablid. Mittemetallmaterjalide katsetusviisid. Osa 511: Mehaanilised katsetused. Polüeteenkompaundide sulavoolamisindeksi mõõtmine

Electric and optical fibre cables - Test methods for non-metallic materials - Part 511: Mechanical tests - Measurement of the melt flow index of polyethylene compounds

EESTI STANDARDIKESKUS
ESTONIAN CENTRE FOR STANDARDISATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 60811-511:2012 sisaldab Euroopa standardi EN 60811-511:2012 ingliskeelset teksti.	This Estonian standard EVS-EN 60811-511:2012 consists of the English text of the European standard EN 60811-511:2012.
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 15.06.2012.	Date of Availability of the European standard is 15.06.2012.
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 29.035.01, 29.060.20

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60811-511

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ICS 29.035.01; 29.060.20

Supersedes EN 60811-4-1:2004 (partially)

English version

Electric and optical fibre cables - Test methods for non-metallic materials - Part 511: Mechanical tests - Measurement of the melt flow index of polyethylene compounds

(IEC 60811-511:2012)

Câbles électriques et à fibres optiques - Méthodes d'essai pour les matériaux non-métalliques - Partie 511: Essais mécaniques - Mesure de l'indice de fluidité à chaud des mélanges polyéthylène (CEI 60811-511:2012)

Kabel, isolierte Leitungen und Glasfaserkabel - Prüfverfahren für nichtmetallene Werkstoffe - Teil 511: Mechanische Prüfungen - Messung des Schmelzindex von Polyethylenmischungen (IEC 60811-511:2012)

This European Standard was approved by CENELEC on 2012-04-17. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

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

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 CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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 60811-511:2012 E

Foreword

The text of document 20/1307/FDIS, future edition 1 of IEC 60811-511, prepared by IEC/TC 20 "Electric cables" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60811-511:2012.

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)	2013-01-17
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2015-04-17

This document supersedes Clause 10 of EN 60811-4-1:2004 (partially). Full details of the replacements are shown in Annex A of EN 60811-100:2012.

There are no specific technical changes with respect to EN 60811-4-1:2004, but see the Foreword to EN 60811-100:2012.

This standard is to be read in conjunction with EN 60811-100.

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.

This standard covers the Principle Elements of the Safety Objectives for Electrical Equipment Designed for Use within Certain Voltage Limits (LVD - 2006/95/EC).

Endorsement notice

The text of the International Standard IEC 60811-511:2012 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60811-4-1:2004	NOTE	Harmonized as EN 60811-4-1:2004 (not modified).
ISO 1133 series	NOTE	Harmonized as EN ISO 1133 series.

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 60811-100	2012	Electric and optical fibre cables - Test methods for non-metallic materials - Part 100: General	EN 60811-100	2012
IEC 60811-606	-	Electric and optical fibre cables - Test methods for non-metallic materials - Part 606: Physical tests - Methods for determining the density	EN 60811-606	-

CONTENTS

INTRODUCTION

The IEC 60811 series specifies the test methods to be used for testing non-metallic materials of all types of cables. These test methods are intended to be referenced in standards for cable construction and for cable materials.

NOTE 1 Non-metallic materials are typically used for insulating, sheathing, bedding, filling or taping within cables.

NOTE 2 These test methods are accepted as basic and fundamental and have been developed and used over many years principally for the materials in all energy cables. They have also been widely accepted and used for other cables, in particular optical fibre cables, communication and control cables and cables for ships and offshore applications.

ELECTRIC AND OPTICAL FIBRE CABLES – TEST METHODS FOR NON-METALLIC MATERIALS –

Part 511: Mechanical tests – Measurement of the melt flow index of polyethylene compounds

1 Scope

This Part 511 of IEC 60811 describes the procedure for the measurement of the melt flow index for polyethylene compounds.

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 60811-100:2012, *Electric and optical fibre cables – Test methods for non-metallic materials – Part 100: General*

IEC 60811-606, *Electric and optical fibre cables – Test methods for non-metallic materials- Part 606: Physical tests – Methods for determining the density*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60811-100 apply.

Additionally, for the purposes of this standard, a distinction is made between low-density, medium-density and high-density PE as shown in Table 1.

Table 1 – Definition of types of polyethylene

Type of polyethylene	**Density at 23 °C** [a] g/cm^3
Low-density polyethylene	≤ 0,925
Medium-density polyethylene	> 0,925 ≤ 0,940
High-density polyethylene	> 0,940
[a] These densities refer to unfilled resins as determined by the method specified in IEC 60811-606.	

4 Test method

4.1 General

This part of IEC 60811 shall be used in conjunction with Part 100: General

All the tests shall be carried out not less than 16 h after the extrusion of the insulating or sheathing compounds.