

**Elektrilised kaablid ja optilised kiudkaablid.  
Mittemetallmaterjalide katsetusviisid. Osa 506:  
Mehaanilised katsetused. Isolatsiooni ja mantlite  
löökkatsetamine madalal temperatuuril**

**Electric and optical fibre cables - Test methods for non-metallic materials - Part 506: Mechanical tests - Impact test at low temperature for insulations and sheaths**

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**Electric and optical fibre cables -  
Test methods for non-metallic materials -  
Part 506: Mechanical tests -  
Impact test at low temperature for insulations and sheaths  
(IEC 60811-506:2012)**

Câbles électriques et à fibres optiques -  
Méthodes d'essai pour les matériaux  
non-métalliques -  
Partie 506: Essais mécaniques -  
Essai de choc à basse température pour  
les enveloppes isolantes et les gaines  
(CEI 60811-506:2012)

Kabel, isolierte Leitungen  
und Glasfaserkabel -  
Prüfverfahren für nichtmetallene  
Werkstoffe -  
Teil 506: Mechanische Prüfungen -  
Schlagprüfungen bei niedriger Temperatur  
für Isolierhüllen und Mäntel  
(IEC 60811-506:2012)

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European Committee for Electrotechnical Standardization  
Comité Européen de Normalisation Electrotechnique  
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## Foreword

The text of document 20/1302/FDIS, future edition 1 of IEC 60811-506, prepared by IEC/TC 20 "Electric cables" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60811-506:2012.

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- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2015-04-17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 8.5 of EN 60811-1-4:1995 + A2:2001 (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 60811-1-4:1995, 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 60811-506:2012 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated :

IEC 60811-1-4:1985      NOTE      Harmonized as EN 60811-1-4:1995 (not modified).

**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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60811-100	2012	Electric and optical fibre cables - Test methods for non-metallic materials - Part 100: General	EN 60811-100	2012

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## 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 506: Mechanical tests – Impact test at low temperature for insulations and sheaths**

### **1 Scope**

This Part 506 of IEC 60811 gives the procedure for performing impact tests at low temperature on extruded insulations and sheaths.

### **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*

### **3 Terms and definitions**

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

### **4 Test method**

#### **4.1 General**

This part of IEC 60811 shall be used in conjunction with IEC 60811-100.

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

Tests shall be carried out at the temperature specified in the relevant cable standard.

This cold impact test is intended for sheathed cables of any type, irrespective of the type of insulation of the cores, and for the insulation of wires, cables and flat cables without sheath if required by the relevant cable standard.

The insulation of sheathed cables is not subjected directly to the cold impact test.

#### **4.2 Sampling and preparation of the test pieces**

Three pieces of complete cable each having a length at least five times the diameter of the cable with a minimum of 150 mm, shall be taken. All covering external to the component shall be removed.

#### **4.3 Apparatus**

The apparatus to be used for this test is represented in Figure 1, with explanations.