IEC 60811-506

Edition 1.0 2012-03

INTERNATIONAL STANDARD

NORME INTERNATIONALE

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

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

IEC 60811-506:2012

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

COMMISSION ELECTROTECHNIQUE INTERNATIONALE

PRICE CODE
CODE PRIX K

ICS 29.035.01; 29.060.20

ISBN 978-2-88912-981-2

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

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

FOREWORD

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International Standard IEC 60811-506 has been prepared by IEC technical committee 20: Electric cables.

This Part 506 of IEC 60811 cancels and replaces 8.5 of IEC 60811-1-4:1985, which is withdrawn. Full details of the replacements are shown in Annex A of IEC 60811-100:2012.

There are no specific technical changes with respect to the previous edition, but see the Foreword to IEC 60811-100:2012.

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

FDIS	Report on voting
20/1302/FDIS	20/1351/RVD

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

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

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

A list of all the parts in the IEC 60811 series, published under the general title *Electric and optical fibre cables – Test methods for non-metallic materials*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

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.