

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Heat shrinkable low and medium voltage moulded shapes –
Part 1: General requirements

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Profils thermorétractables basse et moyenne tensions –
Partie 1: Exigences générales

<https://standards.iteh.ai/catalog/standards/sist/5c4a49ba-3a63-4e2b-a19b-a9358b50acf2/iec-62677-1-2017>



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IEC Central Office
3, rue de Varembe
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
Fax: +41 22 919 03 00
info@iec.ch
www.iec.ch

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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VOLTAGE MOULDED SHAPES –**
Part 1: General requirements**FOREWORD**

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International Standard IEC 62677-1 has been prepared by IEC technical committee 15: Solid electrical insulating materials.

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

| | |
|-------------|------------------|
| FDIS | Report on voting |
| 15/806/FDIS | 15/810/RVD |

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

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

A list of all parts in the IEC 62677 series, published under the general title *Heat shrinkable low and medium voltage moulded shapes*, can be found on the IEC website.

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

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- replaced by a revised edition, or
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INTRODUCTION

This part of IEC 62677 is one of a series which deals with heat shrinkable low and medium voltage moulded shapes. The series consists of three parts:

Part 1: General requirements (IEC 62677-1)

Part 2: Methods of test (IEC 62677-2¹)

Part 3: Material requirements (IEC 62677-3-101², IEC 62677-3-102³ and IEC 62677-3-103⁴)

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[IEC 62677-1:2017](https://standards.iteh.ai/catalog/standards/sist/5c4a49ba-3a63-4e2b-a19b-a9358b50acf2/iec-62677-1-2017)

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¹ Under preparation. Stage at the time of publication: IEC RFDIS IEC 62677-2:2017.

² Under preparation. Stage at the time of publication: IEC AFDIS IEC 62677-3-101:2017.

³ Under preparation. Stage at the time of publication: IEC AFDIS IEC 62677-3-102:2017.

⁴ Under preparation. Stage at the time of publication: IEC ACDV IEC 62677-3-103:2017.

HEAT SHRINKABLE LOW AND MEDIUM VOLTAGE MOULDED SHAPES –

Part 1: General requirements

1 Scope

This document is applicable to heat shrinkable low and medium voltage moulded shapes in a range of configurations and materials suitable for insulation, environmental sealing, mechanical protection, electrical conductance, anti-tracking and strain relief for power cable terminations, joints and stop ends. It specifies the test methods and material requirements. The most commonly available shapes are as shown in the Annex A.

Materials which conform to this document meet established levels of performance. However, the selection of a material by a user for a specific application will be based on the actual requirements necessary for adequate performance in that application and will not be based on this document alone.

These moulded shapes are designed to be used in low and medium voltage cable accessories and as such electrical performance will be proven as part of the assembly. Examples of this are described in EN 50393, HD 629-1 and IEC 60502-4.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60050 (all parts), *International Electrotechnical Vocabulary* (available at <http://www.electropedia.org>)

IEC 60050-212:2010, *International Electrotechnical Vocabulary - Part 212: Electrical insulating solids, liquids and gases*

IEC 60050-212:2010/AMD1:2015

IEC 60050-212:2010/AMD2:2015

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60050-212:2010/IEC 60050-212:2010/AMD1:2015/IEC 60050-212:2010/AMD2:2015, Section 11 (terms relating to electric properties) and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1
central value
median

middle result of an odd number of measurements or mean of the two middle results of an even number of measurements when arranged in order of magnitude

3.2
consignment

set of materials of one size, type, grade and colour submitted for delivery at the same time

4 Moulded shape material specimens

Specimens shall be cut from standard test sheets ($2 \pm 0,15$) mm thick and, unless otherwise specified, shall be prepared from the same heat shrinkable material that is used to manufacture the heat shrinkable moulded shapes. The dimensions of the sheet shall be sufficient to enable any of the relevant tests in IEC 62677-3 (all parts) to be performed.

NOTE A suitable size has been found to be 150 mm x 150 mm.

5 Classification

Moulded shapes are classified by style configuration as shown in the Annex A.

6 Ordering

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When ordering heat shrinkable moulded shapes, purchasers should include the description as detailed under designation given in the sheets of IEC 62677-3 (all parts).

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7 Dimensions

Preferred types are given in Annex A; dimensions are subject to agreement between purchaser and supplier.

8 Colour

The standard colours are black, red and brown.

Non standard colours shall be subject to agreement between customer and supplier.

9 Finish

The heat shrinkable moulded shapes shall be uniform in appearance, and free from internal and external irregularities.

There shall be no defects capable of affecting the characteristics specified in IEC 62677-3 (all parts).

10 Packaging

Heat shrinkable moulded shapes shall be supplied in a way that ensures adequate protection during transport, handling and storage.

11 Labelling

Each unit pack shall have the designation information clearly and indelibly marked on it as given in the sheets of IEC 62677-3 (all parts) and the following information, unless otherwise agreed between purchaser and supplier:

- a) manufacturers or suppliers name or identification mark;
- b) batch number;
- c) quantity.

12 Qualification approval requirements

12.1 When agreed between purchaser and supplier, the supplier shall provide third party certification by an approval body.

12.2 Where agreed between the purchaser and supplier, the supplier shall provide details of material composition, agreed techniques and evidence to the satisfaction of the approval body that the heat shrinkable moulded shapes supplied conform to all the requirements listed in the sheets of IEC 62677-3 (all parts).

No changes shall be made to the declared composition and agreed techniques used in the production of the heat shrinkable moulded shapes without the prior written agreement of the approval body.

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Following such changes, the approval body may require a repetition of the qualification testing.

12.3 Qualification tests shall be performed on the size given in the sheets of IEC 62677-3 (all parts).

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12.4 In the event of a failure of the material or moulded shapes to conform to the requirements of a test, the consignment shall be resampled and the test repeated using two further sets of test specimens, Both sets shall conform to the appropriate test requirements, otherwise the heat shrinkable moulded shapes shall be deemed not to conform to the sheet of IEC 62677-3 (all parts).

12.5 In the absence of third party approval, the supplier may be required to supply a test report demonstrating conformance to the relevant sheets of IEC 62677-3 (all parts).

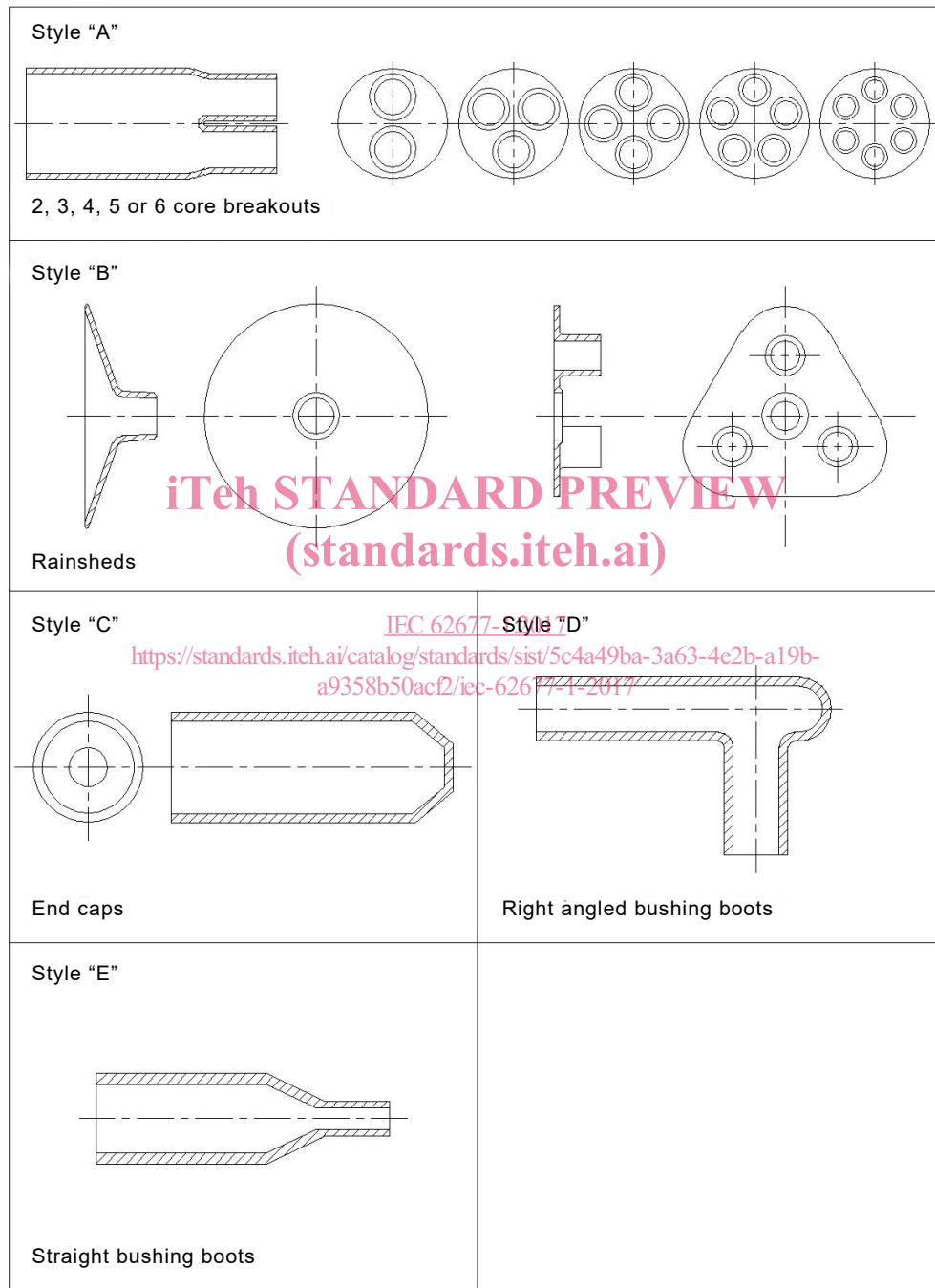
13 Consignment tests

The supplier is responsible for ensuring that all heat shrinkable moulded shapes in one consignment are consistent with the requirements given in the sheets of IEC 62677-3 (all parts). If required by the supplier, the tests to be applied to each consignment shall be agreed with the supplier and where a third party approval is required, the supplier shall agree these tests with the approval body.

Annex A (informative)

Heat shrinkable moulded parts (typical configuration)

Figure A.1 shows a typical configuration of heat shrinkable moulded parts.



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Figure A.1 – Typical configuration of heat shrinkable moulded parts