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2005-11

Heat shrinkable moulded shapes –

Part 1: Definitions and general requirements



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International Electrotechnical Commission, 3, rue de Varembé, PO Box 131, CH-1211 Geneva 20, Switzerland
Telephone: +41 22 919 02 11 Telefax: +41 22 919 03 00 E-mail: inmail@iec.ch Web: www.iec.ch



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

HEAT SHRINKABLE MOULDED SHAPES –

Part 1: Definitions and general requirements

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This International Standard has been prepared by IEC technical committee 15: Standards on specifications for electrical insulating materials.

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

FDIS	Report on voting
15/233/FDIS	15/262/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.

The committee has decided that the contents of this publication will remain unchanged until the maintenance result 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- withdrawn;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.

A bilingual version of this publication may be issued at a later date.

INTRODUCTION

This standard is one of a series which deals with heat shrinkable moulded shapes for electrical insulation purposes. The series will consist of three parts:

- Part 1: Definitions and general requirements
- Part 2: Methods of test
- Part 3: Specification requirements for shape dimensions, material requirements and compatibility performance

HEAT SHRINKABLE MOULDED SHAPES –

Part 1: Definitions and general requirements

1 Scope

This standard is applicable to heat shrinkable moulded shapes in a range of configurations and materials suitable for insulation, environmental sealing, mechanical protection and strain relief for connector/cable terminations and multi-way transitions. It specifies the design and dimensions, test methods, material requirements and compatibility performance. The most commonly available shapes are as shown in Annex A.

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

2 Normative references

The following referenced documents are indispensable for the application 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(212):1990, *International Electrotechnical Vocabulary – Chapter 212: Insulating solids, liquids and gases*

IEC 62329-2: *Heat shrinkable moulded shapes – Part 2: Methods of test* ¹

3 Terms and definitions

For the purposes of this document, the terms and definitions of the International Electrotechnical Vocabulary IEC 60050-212, Section 1 (Terms relating to electrical properties), apply as well as the following:

3.1

central value

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

3.2

consignment

all shapes of one size, type, grade and colour submitted for delivery at the same time

¹ To be published

4 Specimens

4.1 Moulded shape material specimens

Unless otherwise specified, specimens shall be cut from standard test sheets ($2 \pm 0,15$) mm thick, prepared from the same heat shrinkable material as 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 Part 3 to be performed.

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

4.2 Moulded shape compatibility specimens

Specimens for test of compatibility shall consist of a moulded shape, cable sheathed with heat shrink sleeves and metal adaptor. Also, adhesives when supplied as a separate component. The specimen configuration and sizes shall be as specified in Part 2.

5 Classification

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

6 Ordering

When ordering heat shrinkable moulded shapes, purchasers shall include the description as detailed under designation given in the Part 3 sheets.

7 Dimensions

Preferred types and sizes are given in Part 3 but may be subject to agreement between purchaser and supplier.

8 Colour

The standard colour is black.

Non standard colours may 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 Part 3.

10 Packaging

Heat shrinkable moulded shapes shall be supplied in a way which 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 IEC 62329-3 sheets and the following information unless otherwise agreed between purchaser and supplier.

- a) Manufacturers or suppliers name or identification mark
- b) Batch number
- c) Use by date
- d) Quantity

12 Qualification approval requirements

12.1 When agreed between purchaser and supplier, the supplier shall provide third party certification by an approved National or International Approval Agency.

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 approving Authority that the heat shrinkable moulded shapes supplied conform to all the requirements listed in the Part 3 sheets.

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 Certification Approval Agency.

Following such changes the Certification Approval Agency may require a repetition of the Qualification testing.

Certification is valid for a period of 5 years unless otherwise agreed, after which time the supplier shall apply for re-approval for conformance to the Part 3 sheet.

12.3 Qualification tests shall be performed on the size given in the Part 3 sheets.

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 Part 3 sheet.


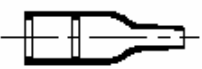


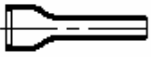


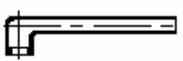
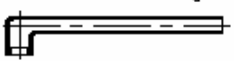










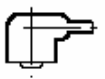

12.5 In the absence of third party approval the supplier may be required to supply a test report demonstrating conformance to relevant Part 3 sheets.

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 Part 3 sheets. 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 authority.

Annex A (informative)

Heat shrinkable moulded shapes (typical configuration after recovery)

<p>Style "A"</p>  <p>(Lipped straight boot) (with short body)</p>	<p>Style "B"</p>  <p>(Lipped straight boot) (with medium body)</p>	<p>Style "C"</p>  <p>(Lipped straight boot) (with long body)</p>
<p>Style "D"</p>  <p>(Non-lipped straight boot)</p>	<p>Style "E"</p>  <p>(Lipped straight boot)</p>	<p>Style "F"</p>  <p>(Lipped right angled boot)</p>
<p>Style "G"</p>  <p>(Non-lipped right angled boot)</p>	<p>Style "H"</p>  <p>(Lipped right angled boot) (with long tail)</p>	<p>Style "I"</p>  <p>(Lipped right angled boot) (with longer tail)</p>
<p>Style "J"</p>  <p>(Lipped straight boot) (with longer tail)</p>	<p>Style "K"</p>  <p>(Non-lipped straight boot) (with long tail)</p>	<p>Style "L"</p>  <p>(Transition "T" junction)</p>
<p>Style "M"</p>  <p>(Transition 30°/45° junction)</p>	<p>Style "N"</p>  <p>(Transition "Y" junction 45°) (low profile)</p>	<p>Style "O"</p>  <p>(Lipped straight boot) (high ratio)</p>
<p>Style "P"</p>  <p>(Transition "Y" junction)</p>	<p>Style "R"</p>  <p>(Transition) (with 3 branched outlets)</p>	<p>Style "S"</p>  <p>(Transition) (with 4 branched outlets)</p>
<p>Style "T"</p>  <p>(Straight boot) (<i>"D"</i> sub-miniature)</p>	<p>Style "U"</p>  <p>(<i>"D"</i> sub-miniature boot, (right angle, longitudinal)</p>	<p>Style "V"</p>  <p>(<i>"D"</i> sub-miniature boot, (right angle, across width)</p>

Bibliography

IEC 62329-3, *Heat shrinkable moulded shapes – Part 3: Specification requirements for shape dimensions, material requirements and compatibility performance* ²

² In consideration



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