

Specification for

Binding and identification sleeves for use on electric cables and wires

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Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Cables and Insulation Standards Policy Committee (CIL/-) to Technical Committee CIL/15, upon which the following bodies were represented:

- British Ceramic Research Ltd.
- British Industrial Ceramic Manufacturers' Association
- Department of Trade and Industry (National Measurement Accreditation Service)
- EEA (the Association of the Electronics, Telecommunications and Business Equipment Industries)
- Electrical and Electronic Insulation Association (BEAMA Ltd.)
- Electricity Association
- Ministry of Defence
- Rotating Electrical Machines Association (BEAMA Ltd.)
- Transmission and Distribution Association (BEAMA Ltd.)

The following bodies were also represented in the drafting of the standard, through subcommittees and panels:

- Adhesive Tape Manufacturers' Association
- Association of Electrical Machinery Trades
- British Rubber Manufacturers Association Ltd.
- Electronic Components Industry Federation

This British Standard, having been prepared under the direction of the Cables and Insulation Standards Policy Committee, was published under the authority of the Standards Board and comes into effect on 15 October 1992

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Foreword

This British Standard has been prepared under the direction of the Cable and Insulation Standards Policy Committee. The sleeves within the field of application of this British Standard are for general purpose use. They are not intended for use as primary insulation. This British Standard supersedes BS 3858:1965 which is withdrawn. Flexible sleeving for electrical purposes are within the fields of application of BS 2848, BS 6893-1 and BS 6893-2, while elastomeric sleeves for aircraft electric cables and equipment wires are specified in BS 3G 198-1. It is envisaged that BS 2848 will ultimately be withdrawn and replaced by a Part of BS 6893.

The different wall thicknesses of polychloroprene sleeves of type 1 and type 2 of BS 3858:1965 have been incorporated into type 1 of this revision.

WARNING. This standard calls for the use of substances and/or test procedures that may be injurious to health if adequate precautions are not taken. It refers only to technical suitability and in no way absolves either the supplier or the user from statutory obligations relating to health and safety at any stage of manufacture or use.

Product certification. Users of this British Standard are advised to consider the desirability of third party certification of product conformity with this British Standard based on testing and continuing product surveillance which may be coupled with assessment of a supplier's quality systems against the appropriate Part of BS 5750.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 10, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

Introduction

Type 1, 3 and 4 sleeves are subject to stiffening at subzero temperatures, and should not be flexed in use at these temperatures. Sleeves are normally expanded in use, up to twice their nominal bore for types 1, 4 and 5, and one and a half times their nominal bore for type 3 sleeves. Type 1, 3 and 4 sleeves are suitable for use where there may be occasional contamination by mineral lubricating oils and certain hydraulic fluids. Type 5 sleeves have limited resistance to hydrocarbon fluids and should not be used where such contamination is likely. All sleeves are available in a range of colours, and may have characters or legends printed on them for identification purposes.

1 Scope

This British Standard specifies requirements and tests for binding and identification sleeves intended for use on electric cables and insulated wires.

NOTE These sleeves are not for use as primary insulation. The standard applies to sleeves of the following types:

- a) type 1 sleeves are polychloroprene and suitable for temperature ranges of -65°C to 70°C ;
- b) type 3 sleeves are poly(vinyl chloride) (PVC) and suitable for temperature ranges of -65°C to 70°C ;
- c) type 4 sleeves are PVC/nitrile and suitable for temperature ranges of -65°C to 70°C ;
- d) type 5 sleeves are silicone and suitable for temperature ranges of -65°C to 150°C .

2 References

2.1 Normative references

This British Standard incorporates, by reference, provisions from specific editions of other publications. These normative references are cited at the appropriate points in the text and the publications are listed on the page 10. Subsequent amendments to, or revisions of, any of these publications apply to this British Standard only when incorporated in it by updating or revision.

2.2 Informative references

This British Standard refers to other publications that provide information or guidance. Editions of these publications current at the time of issue of this standard are listed on page 10, but reference should be made to the latest editions.

3 Types

Sleeves shall be one of the following types.

- a) Type 1 sleeves are polychloroprene rubber sleeves having increasing wall thicknesses over a range of bore sizes, with fairly wide permissible tolerances on bore sizes.

NOTE 1 These are available in three different wall thickness ranges (a, b and c).

- b) Type 3 sleeves are based on poly(vinyl chloride) (PVC) polymers, copolymers, or blends thereof and have wall thicknesses which increase slightly with bore sizes. They shall conform to either type E3 of BS 2571 or type 4 of BS 6746.

NOTE 2 Tolerances on wall thickness and bore are closer than for types 1, 4 and 5.

- c) Type 4 sleeves are based on a mixture or copolymer of acrylonitrile-butadiene rubber and PVC and have wall thicknesses which increase with bore size.

NOTE 3 Tolerances on wall and bore sizes are similar to type 1.

- d) Type 5 sleeves are silicone rubber and have a range of permissible wall thicknesses for all bore sizes.

NOTE 4 These are available in three different wall thickness ranges (a, b and c).

4 Materials and finishes

The sleeves shall be smooth and free from bubbles, pinholes, creases, and other defects in appearance (see clause 9.1). Type 1 material shall contain no natural rubber, reclaim, nor ground, vulcanized waste.

NOTE See BS 7164-7.1.

5 Colour

The colour shall be one of the following:

- pink;
- orange;
- violet;
- green/yellow stripe;
- black;
- yellow;
- grey;
- brown;
- green;
- white;
- red;
- blue;
- uncoloured transparent (for type 3 only);
- uncoloured translucent (for type 3 and type 5 only).