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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 42734-2023

**Non-flame retarded dual wall heat-shrinkable polyolefin
sleeving - thick and medium wall**

中厚壁非阻燃双壁聚烯烃热收缩管

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Foreword

This document is in accordance with the provisions of GB/T 1:1-2020 "Guidelines for Standardization Work Part 1: Structure and Drafting Rules for Standardization Documents" drafting: This document is modified to adopt IEC 60684-3-247:2019 "Insulated hoses Part 3: Specifications for various types of hoses Part 247: Medium Thick-Wall Non-Flame-Retardant Double-Wall Polyolefin Heat-Shrinkable Tubing": Compared with IEC 60684-3-247:2019, this document has made the following structural adjustments:

--- The chapter "Terms and Definitions" has been added;

---Chapter 5 corresponds to Chapter 1, Chapter 6, Table 1~Table 3 and the notes and footnotes in Table 2 of IEC 60684-3-247:2019, where 5:1 corresponds to the third paragraph to the sixth paragraph of Chapter 1 of IEC 60684-3-247:2019, and paragraph 5:2 corresponds to IEC 60684-3-247:2019 Chapter 6, 5:3 corresponds to the notes and footnotes in Table 2;

---Chapter 6 corresponds to the test method in column 2 and the remarks in column 6 in Table 1 of IEC 60684-3-247:2019;

4 The third paragraph corresponds to Chapter 7 of IEC 60684-3-283:2010: The technical differences between this document and IEC 60684-3-247:2019 and their reasons are as follows:

--- Deleted the normative references "IEC 60757:1983" and "ISO 11357-3:2018" to meet my country's national conditions and facilitate application;

--- The chapter "Naming" has been deleted to conform to my country's national conditions and facilitate application;

--- Deleted "storage dimensional stability" and "melting point" to meet my country's national conditions and facilitate application;

- Added the normative reference "GB/T 2828:1-2012" (see 7:3) to meet the technical conditions of our country and facilitate the application;
- IEC 60296:2012 is replaced by GB 2536-2011 with normative references (see Table 3), the consistency program between the two documents The degree is modified to meet the technical conditions of our country and facilitate the application;
- Replaced IEC 60684-2:2011 (see Chapter 6) with the normatively referenced GB/T 7113:2-2014, between the two documents The degree of consistency is modified to meet the technical conditions of our country and facilitate application;
- Changed the "length change", changed "-10" to the minimum value and changed 5 to the maximum value (see Table 1), in order to comply with my country's technical Technical conditions, easy to apply;
- Increase the test temperature tolerance of "low temperature bendability" and the completion test time of "fluid resistance" (see 6:4 and 6:9) to comply with In line with our country's national conditions, easy to apply;
- The chapter "Inspection Rules" (see Chapter 7) has been added to meet the technical conditions of our country and facilitate application;

1 Scope

GB/T 42734-2023 specifies medium and thick wall non-flame-retardant dual wall heat-shrinkable polyolefin sleeving, adopting IEC 60684-3-247 with modifications. Dual wall means an outer polyolefin tube lined with an adhesive that melts as the tube shrinks and flows into the irregularities of what it is covering, which is what makes the joint sealed rather than merely covered - the reason this sleeving is used on buried cable joints, automotive harnesses and connections that will be under water or in the ground for decades. The standard sets the test conditions, the technical requirements including the general and performance requirements and the breakdown voltage, and the test methods for the inner diameter, wall thickness and concentricity, thermal shock, longitudinal change, low temperature bending, volume resistivity, long-term thermal ageing and carbon black content. It took effect on 1 December 2023.

This document specifies the technical requirements, test methods, inspection rules and marking, packaging, Transport and storage: This document applies to medium-thick non-flame-retardant double-wall polyolefin heat-shrinkable tubing with a nominal shrinkage ratio of 3:1 and a maximum service temperature of 100°C:

2 Normative references

The contents of the following documents constitute the essential provisions of this document through normative references in the text: Among them, dated references For

documents, only the version corresponding to the date is applicable to this document; for undated reference documents, the latest version (including all amendments) is applicable to this document:

GB/T 2411-2008 Determination of indentation hardness (Shore hardness) of plastics and hard rubber using a durometer (ISO 868:2003, IDT)

GB 2536-2011 Unused mineral insulating oils for electrical fluid transformers and switches (IEC 60296:2003, MOD)

GB/T 2828.1-2012 Counting sampling inspection procedure Part 1: Batch-by-batch inspection sampling retrieved by acceptance quality limit (AQL) Plan (ISO 2859-1:1999, IDT)

GB/T 7113.1-2014 Insulating hoses - Part 1: Definitions and general requirements (IEC 60684-1:2003, MOD)

Note: There is no technical difference between the referenced content of

GB/T 7113.1-2014 and the referenced content of IEC 60684-1:2003:

GB/T 7113.2-2014 Insulating hoses - Part 2: Test methods (IEC 60684-2:2003, MOD)

GB/T 33047.1-2016 Plastic polymer thermogravimetric method (TG) Part 1: General principles (ISO 11358-1:2014, MOD)

Note: There is no technical difference between the referenced content of

GB/T 33047.1-2016 and the referenced content of ISO 11358-1:2014:

3 Terms and Definitions

This document does not have terms and definitions that need to be defined:

4 Test conditions

In the absence of regulations, medium-thick non-flame-retardant double-wall polyolefin heat-shrinkable tubing should be placed in an oven with forced air circulation at: $200^{\circ}\text{C} \pm$ The test was performed after shrinking for $10\text{min} \pm 1\text{min}$ at 3°C :

5 Technical Requirements

1 General requirements Medium-thick-walled non-flame-retardant double-walled polyolefin heat-shrinkable tubing is divided into Type A (medium-walled) and Type B (thick-walled), and the inner diameter is usually not more than: 200mm: It is generally black, and the inner diameter and wall thickness are shown in Appendix A, which can also be determined through negotiation between the supplier and the buyer: In special applications, the selection of materials should meet In addition to the requirements of this document, the

performance requirements of the application shall also be met: 5:

2 General and performance requirements In addition to the general requirements stipulated in GB/T 7113:1-2014, medium-thick non-flame-retardant double-wall polyolefin heat shrinkable tubes should also meet the

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