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

GB/T 11019-2021

Replacing GB/T 11019-2009

Nickel coated round copper wire

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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 of Standardization Documents" Drafting. This document replaces GB/T 11019-2009 "Nickel-plated round copper wire", compared with GB/T 11019-2009, except for structural adjustments and editability. In addition to the changes, the main technical changes are as follows:

- Added the requirements for the grade of nickel-plated round copper wire (see 4.3);
- Added the visual inspection method (see 6.1.2);
- Change the elongation requirements (see Chapter 8, Chapter 8 of the.2009 edition);
- Changed the resistivity requirements (see Chapter 9, Chapter 9 of the.2009 edition);
- Added joint requirements (see Chapter 10);
- Change the inspection rules (see Chapter 11, Chapter 10 of the.2009 edition);
- Added the product specifications and coating requirements commonly used abroad (see Appendix A);
- Deleted the scope of application of the electronic method and chemical method for the determination of nickel content (see A.1 and B.1 in the.2009 edition);
- The calculation formula of chemical nickel content (mass fraction) has been added (see

C.4.1). Please note that some of the contents of this document may involve patents. The issuing agency of this document is not responsible for identifying patents. This document was proposed by the China Electrical Equipment Industry Association. This document is under the jurisdiction of the National Bare Wire Standardization Technical Committee (SAC/TC422). Drafting organizations of this document. Shanghai Cable Research Institute Co., Ltd., Shanghai National Cable Testing Center Co., Ltd., Jiangsu Guangchuan Superconducting Technology Co., Ltd. Company, Jiangsu Tongguang Electronic Cable Co., Ltd., Leping Wire Industry (Huizhou) Co., Ltd., Jiangsu Baosheng Precision Conductor Co., Ltd., Shenzhen Shenzhen Shenzhou Cable Co., Ltd., Dongguan Diwang Communication Technology Co., Ltd. The main drafters of this document. Yao Dawei, Zhang Yuanwang, Ding Zhenpei, Xie Guofeng, Chen Hui, Chen Dan, Zhang Tizhen, Zhou Huabin, Zhou Xiaoming, Wu Yifeng, Wang Shusen. The previous versions of this document and the documents replaced are as follows:

--- First published in 1989 as GB/T 11019-1989, first revised in 2009;

--- This is the second revision. Nickel-plated round copper wire

1 Scope

GB/T 11019-2021 is the Chinese national standard on nickel coated round copper wire, in the field of electrical engineering. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 11 October 2021 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 May 2022. Classification: ICS 29.060.10, CCS K11. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This document specifies the type, specification, grade and representation method of nickel-plated round copper wire, material, coating, dimensional deviation, elongation, resistivity, connection Technical requirements and test methods for the head, as well as inspection rules, packaging and markings. This document is applicable to nickel-plated round copper wires for the manufacture of wires, cables and electrical products.

2 Normative references

The contents of the following documents constitute the indispensable clauses of this document through normative references in the text. Among them, dated quotations Only the version corresponding to that date is applicable to this document; for undated reference documents, the latest version (including all amendments) is applicable to This document.

GB/T 3048.2 Test methods for electrical properties of wires and cables Part

3 Terms and definitions

There are no terms and definitions that need to be defined in this document.

4 Model, specification, grade and representation method

4.1 Model The model of nickel-plated round copper wire is: TRN.

4.2 Specifications The specifications of nickel-plated round copper wire are expressed by the nominal diameter, as shown in Table 2.

4.3 Grade The grade of nickel-plated round copper wire is determined by the nickel content, and the nickel content of each grade is shown in Table 1.

9 Coating continuity test Sodium polysulfide method

GB/T 4909.11 Bare wire test method Part

11 Coating adhesion test

GB/T 6516 Electrolytic Nickel