

ICS 29.060.10

CCS K11



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

GB/T 12970.4-2009

Replacing GB 12970.4-1991

**Flexilbe copper stranded conductors for electrical purposes -
Part 4: Copper wires for electric brush**

电工软铜绞线 第4部分：铜电刷线

Issued on: March 19, 2009

Implemented on: December 1, 2009

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine of the People's Republic of China;
Standardization Administration of China**

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Foreword

GB/T 12970 "Electrical soft copper stranded" is divided into four parts.

--- Part 1. General requirements;

--- Part 2. soft copper wire;

--- Part 3. Flexible copper antenna;

--- Part 4. Copper wire brush. This section GB/T Part of 412,970. This Part replaces GB/T 12970.4-1991 "electrician soft copper stranded Part 4. Copper wire brush." This section compared with the GB/T 12970.4-1991 The main changes are as follows:

--- Remove section provides the structure and process requirements (before version 4.1.3 and 4.3.3);

--- Part of the process requirements of the structural adjustment (before version 4.3.1 and 4.3.2, 4.1.4 of this edition);

--- Modify the length of the manufacturing requirements (before version 4.8, this version 4.7). This part is proposed by the China Electrical Equipment Industrial Association. This part of the National Standardization Technical Committee Wire and Cable (SAC/TC213) centralized. This part of the unit responsible for drafting. Shanghai Electric Cable Research Institute. Participated in the drafting of this section. Shenzhen, China Cable Co., Ltd., Shanghai copper metal braid copper plant Jiang Su Jiangrun Copper Co. the company. The main drafters of this section. Liu Bin, party Peng, Zhang Peng, Chenya Fu, Liu Liming. This part of the standard replaces the previous editions are.

--- GB/T 12970.4-1991. Electrical soft copper wire Part 4. Copper wire brush

1 Scope

GB/T 12970.4-2009 is the Chinese national standard on flexilbe copper stranded conductors for electrical purposes - part 4: copper wires for electric brush, 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 19 March 2009 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 December 2009. 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.

GB/T 12970 provisions of this section copper brush wire model specifications, technical requirements and testing. This section applies to electrical and motor on the instrument line connecting copper wire brush. This section should be used in conjunction with the GB/T 12970.1-2009.

2 Normative references

The following documents contain provisions which, through reference

GB/T 12970 in this section constitute provisions of this section. For dated reference documents Member, all subsequent amendments (not including errata content) or revisions do not apply to this section, however, encouraged to reach under this section Parties to research agreement to use the latest versions of these documents. For undated reference documents, the latest versions apply to this section.

GB/T 3048.4-2007 electrical wire and cable performance test methods - Part 4. Conductor DC resistance test

GB/T 4909.2-2009 Test methods for bare wires - Part 2. Measure

GB/T 4909.3-2009 Test methods for bare wires - Part 3. Tensile Test

GB/T 12970.1-2009 Electrical soft copper wire - Part 1. General requirements

3 Models and specifications

Copper brush wire models and specifications shown in Table 1. Table 1 copper wire brush type and specifications

Model Name	Nominal cross-sectional area mm ²	TS	TSX	TSR
Copper wire brush				
Tinned copper wire brush				
Soft copper wire brush				

0.25 to 16

0.25 to 16

0.063 to 6.3 4. Technical Requirements

4.1 Structure

4.1.1 TS-type structure and TSX copper brush wire should meet the requirements of Table 2. Structure

4.1.2 TSR soft copper wire brush should be in accordance with Table 3.

4.1.3 There should be no shortage of brush line stocks, shares or broken strands damage phenomenon, the strands do not allow the entire shares welding.

4.1.4 lack of individual strands of wire should not exceed 3% of the total number of strands in a single line.

4.2 Stranded

4.2.1 wire brush to the outermost layer should be twisted to the right. Unless otherwise supply and demand sides of lay protocol, adjacent layers should contrast, the twisted strands by Specified by the manufacturer. Section

4.2.2 twisted inner diameter ratio should be less than 12, the outer stranding pitch diameter ratio should be 8 to 10. Section

4.2.3 strand diameter ratio should be less than 25.