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CCS J33



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

GB/T 13679-2016

Replacing GB/T 13679-1992

Manganese base brazing filler metal

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Foreword

This standard is drafted in accordance with the rules given in GB/T 1.1-2009. This standard replaces GB/T 13679-1992 "manganese-based solder", compared with GB/T 13679-1992, the main technical changes are as follows: - reaffirmed the validity of the standard (see Chapter 2);

--- Added solder type designation method and solder mark (see Chapter 3); - Incorporating "specifications and limit deviations, technical requirements" into Chapter 5 "Technical Conditions" (see Chapter 5); - Removes specifications and tolerances for filamentous solder (see Chapter 4 of the 1992 edition);

--- Added "Product Quality Certificate" (see Chapter 7). This standard is proposed by the National Welding Standardization Technical Committee (SAC/TC55). The drafting of this standard. Zhejiang Yatong Welding Material Co., Ltd., Changshu Huayin Solder Co., Ltd., Harbin Institute of Technology, aerospace materials and Technology Research Institute, Hangzhou Huaguang Welding New Materials Co., Ltd., Zhengzhou Institute of Machinery, Institute of Mechanical Science and Technology Harbin Institute of Welding. The main drafters of this standard. Liu Ping, He Peng, Gu Wenhua, Mao Jianying, Jin Li Mei, Long Weimin, Lv Xiaochun, Su Jinhua. This standard replaced the previous version of the standard release.

--- GB/T 13679-1992. Manganese-based solder

1 Scope

GB/T 13679-2016 is the Chinese national standard on manganese base brazing filler metal, in the field of manufacturing 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 13 October 2016 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 May 2017. Classification: ICS 25.160.50, CCS J33. 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 standard specifies the classification and type of manganese-based solder, chemical composition, technical conditions, test methods and inspection rules, packaging, signs, products Quality certificate. This standard applies to the gas protection of the furnace brazing, induction brazing and other methods used in the solder.

2 Normative reference documents

The following documents are indispensable for the application of this document. For dated references, only the dated edition applies to this article. For undated references, the latest edition (including all modifications) applies to this document. Iron and steel - Determination of manganese content - Potentiometric titration or visual titration Iron and steel - Determination of nickel content - Butadiene oxime spectrophotometric method GB/T

GB/T 223.59 Determination of phosphorus content of iron, steel and alloy - Bismuth phosphorus molybdenum blue spectrophotometric method and antimony phosphomolybdenum blue spectrophotometric method Steel and alloys - Determination of boron content - Methanol distillation - Curcumin photometric method GB/T

GB/T 223.79 Determination of multi-element content of steel X-ray fluorescence spectrometry (conventional method)

GB/T 1480 metal powder dry sieving method for determination of particle size Method for sampling powder for powder metallurgy GB/T Marking and Judgment of Numeric Ratification Rule and Limit Value of

GB/T 8170 GB/T .20123 Determination of total carbon and sulfur content of steel - High frequency induction furnace after combustion infrared absorption method (conventional method) YS/T 539.6 Methods for chemical analysis of nickel-based alloy powders - Part 6. Determination of iron content - Titanium trichloride - Potassium dichromate titration

3 Classification and model

3.1 Classification of brazing filler metal The classification and type of solder are shown in Table 1. Table

1 Classification and type of brazing filler metal Classification of solder type Manganese nickel chrome BMn70NiCr BMn40NiCrCoFe Manganese nickel cobalt BMn68NiCo BMn65NiCoFeB Manganese nickel copper BMn52NiCuCr BMn50NiCuCrCo BMn45NiCu