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

GB/T 14235.2-2018

Replacing GB/T 14235.2-1993

**Low temperature pattern wax materials for investment casting -
Part 2: Testing methods for usability properties**

熔模铸造低温模料 第2部分：使用性能试验方法

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Foreword

GB/T 14235 "Flame Casting Low Temperature Mold" is divided into two parts.

--- Part 1. Physical performance test methods;

--- Part 2. Use performance test methods. This part is the second part of GB/T 14235. This part is drafted in accordance with the rules given in GB/T 1.1-2009. This part replaces GB/T 14235.2-1993 "Method for determination of bending strength of investment casting mold", GB/T 14235.5-1993 "melting Method for Measuring Surface Hardness of Mold Casting Mold, GB/T 14235.9-1993 "Method for Measuring Thermal Stability of Investment Casting Mold" Standard; this part is to integrate GB/T 14235.2-1993, GB/T 14235.5-1993 and GB/T 14235.9-1993 standards Order. Compared with the three standards replaced, the main technical contents of this section are as follows:

--- Revised the scope of application of the standard (see Chapter 1);

--- Increase the measurement method of the wetting angle of the investment casting mold binder (see Chapter 6);

--- Added test report (see Chapter 7);

--- Appendix A gives a comparison table of the differences between this part and the three replaced standards. This part is proposed and managed by the National Foundry Standardization Technical Committee (SAC/TC54). This section is responsible for drafting unit. Ningbo Jiwei Investment Casting Co., Ltd. Participated in the drafting of this section. Dongying Jiayang Precision Metal Co., Ltd., Dongfeng Precision Casting Co., Ltd., Suzhou Taier Aviation Materials Limited company, Nanjing You Naite Precision Machinery Manufacturing Co., Ltd., Qingdao Xinnuoke Casting Material Technology Co., Ltd. The main drafters of this section. Luo Shaokang, Xu Luodong, Wei Zhiyu, Chen Yahui, Duan Jidong,

Ma Bo, Lan Yong, Li Yi, Zhang Xiao, Song Shanshan, Zhu Shunfeng, Li Hua, Shao Bin, Wu Chao. The previous versions of the standards replaced by this section are.

---GB/T 14235.2-1993;

---GB/T 14235.5-1993;

---GB/T 14235.9-1993. Investment casting low temperature molding Part 2. Performance test methods

1 Scope

GB/T 14235.2-2018 is the Chinese national standard on low temperature pattern wax materials for investment casting - part 2: testing methods for usability properties, in the field of chemical technology. 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 28 December 2018 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 May 2019. Classification: ICS 71.040.50, CCS J31. 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 part of GB/T 14235 specifies the bending strength, surface hardness, thermal stability and investment-bonding agent of investment casting low temperature molding materials. Test method for performance properties such as wet angle. This section applies to the bending strength, surface hardness, thermal stability and investment-wetting angle of investment casting low-temperature molding materials. Can measure.

2 Terms and definitions

The following terms and definitions apply to this document.

2.1 Room temperature bending strength of low temperature molding materials
bending strength at ambient temperature of low temperature pattern Wax materials The strength obtained from the load at static loading to brittle fracture at a certain loading speed.

3 Determination of bending strength

3.1 Overview of methods for determining the flexural strength at room temperature Using a prepared paste or liquid molding material, press it into a strength sample of a specified size, and place the sample at a certain temperature for 24 hours and then bend it. The performance tester measures the peak load of the static bending brittle fracture, and calculates the bending strength of the sample by the mechanical formula.

3.2 Instruments and equipment Apparatus for determining the flexural strength.

- Bending performance tester. The sample fixture installed on the bending performance tester is shown in Figure 1. The distance between the fulcrums is 30mm.
- Mercury thermometer. The temperature range is 0 °C ~.200 °C, the accuracy is 1 °C.
- Surface thermometer. The temperature range is from 0 °C to 100 °C with an accuracy of 1 °C.
- Constant temperature water bath. Temperature control accuracy ± 1 ° C.
- Vernier caliper. The range is 0mm~150mm, and the precision is 0.02mm.
- Injection machine. pneumatic or hydraulic piston injection machine or waxing machine.