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

GB/T 10423-2025

Replacing GB/T 10423-2002

**Sintered metal friction materials - Determination of tensile
strength**

烧结金属摩擦材料 抗拉强度的测定

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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 replaces GB/T 10423-2002. Compared with GB/T 10423-2002, in addition to structural adjustments and editorial changes, the main technical The technical changes are as follows.

- Added the term "tensile strength" and its definition (see Chapter 3);
- Added test environment requirements (see Chapter 4);
- Changed the accuracy requirements of the testing machine (see 5.1, 3.1 of the 2002 edition);
- Added requirements for extensometers and specimen size measuring instruments (see 5.2, 5.4);
- Increased requirements for sample preparation (see 6.2);
- Increased sample preparation requirements (see 7.1);
- Changed the test speed requirements (see 7.3, 5.3 of the 2002 edition);
- Added test requirements (see 7.4);
- Changed the requirements for rounding off of test results (see 8.2, Chapter 7 of the 2002

edition);

- Increased uncertainty requirements (see Chapter 9);
- Changed the test report content requirements (see 10.2, 8.2 of the 2002 edition).

Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents.

This document is proposed and coordinated by the China Machinery Industry Federation.

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The previous versions of this document and the documents it replaces are as follows.

- First published in 1989 as GB/T 10423-1989;
- First revised in 2002;
- This is the second revision.

1 Scope

This document specifies the method for the determination of the room temperature tensile strength of sintered metallic friction materials.

This document is applicable to the determination of tensile strength of sintered metal friction materials.

2 Normative references

GB/T 228.1-2021

GB/T 8170

GB/T 12160

GB/T 16825.1

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1 tensile strength

σ_{max} The maximum tensile stress that a specimen can withstand under axial tensile force until failure. Note. The unit is MPa.

4 Principles

The maximum load that the specimen can withstand before breaking is divided by the stress obtained at the area of the minimum cross-section of the original specimen as the tensile strength.

Unless otherwise specified, the test is generally carried out at room temperature within the range of 10°C~35°C. For tests with strict temperature requirements, the test temperature should be 23°C±5°C.

5.1 Testing machine

The force measuring system of the testing machine should comply with the requirements of GB/T 16825.1, and its accuracy should be Class 1 or better.

It has sufficient rigidity and should not become unstable within its tensile load range.

5.2 Extensometer

The extensometer should comply with the requirements of GB/T 12160 and its accuracy should be Class 1 or better.