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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 4127.9-2026

Replacing GB/T 4127.9-2007

Bonded abrasive products - Dimensions - Part 9: Grinding wheels for high-pressure grinding

固结磨具 尺寸 第9部分：重负荷磨削砂轮

(English Translation)

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

Drafting.

This document is Part 9 of GB/T 4127 "Dimensions of Bonded Abrasives". GB/T 4127 has already published the following parts.

---Part 1: External cylindrical grinding wheel (workpiece clamped between centers);

---Part 2: Centerless External Circular Grinding Wheel;

---Part 3: Internal Grinding Wheels;

---Part 4: Peripheral Grinding Wheels for Surface Grinding;

---Part 5: Face Grinding Wheels for Surface Grinding;

---Part 6: Grinding wheels for tool grinders and tool chambers;

---Part 7: Manual Operation of Grinding Wheels;

---Part 8: Deburring, roughing, and coarse grinding wheels for stationary machines;

---Part 9: Heavy-Duty Grinding Wheels;

---Part 10: Honing and Superfine Grinding Stones;

---Part 11: Hand-held Polishing Stone;

---Part 12: Deburring and Grinding Wheels for Vertical Grinding Machines;

---Part 13: Deburring and Grinding Wheels for Vertical Grinding Machines;

---Part 14: Deburring, roughing, and coarse grinding wheels for angle grinders;

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---Part 15: Cutting wheels for stationary or mobile cutting machines;

---Part 16: Cutting wheels for handheld power tools;

---Part 17: Shanked Grinding Heads;

---Part 18: Grinding wheels for flat glass edging.

This document replaces GB/T 4127.9-2007 "Dimensions of Bonded Abrasives - Part 9: Heavy-Duty Grinding Wheels", and is consistent with GB/T 4127.9-Compared to 2007, aside from structural adjustments and editorial changes, the main technical changes are as follows.

a) The dimensions of the grinding wheel were changed (see Table 1, 2007 edition);

b) The requirement has been removed (see Chapter 5 of the 2007 edition).

This document is modified to adopt ISO 603-9:2024 "Bound abrasive dimensions - Part 9: Heavy-duty grinding wheels".

The technical differences between this document and ISO 603-9:2024, and the reasons therefor, are as follows.

---ISO 525 has been replaced with the normatively referenced GB/T 2484 (see Chapters 4 and 5) to adapt to my country's technical conditions;

---The commonly used size series of grinding wheels has been added (see Table 1) to conform to the actual situation in my country.

The following editorial changes have been made to this document.

---References in international standards have been removed.

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed by the China Machinery Industry Federation.

This document is under the jurisdiction of the National Technical Committee on Standardization of Abrasives and Grinding Tools (SAC/TC139).

Introduction

To facilitate the production, trade, application, and technical exchange of bonded abrasives, and to ensure the rational use of resources, it is necessary to establish standardized bonded abrasive dimensions.

Size system. Bonded abrasives come in a variety of shapes and have diverse uses; products of the same shape may have different applications, and products of the same purpose may also have different dimensions.

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In various shapes. With the development of the bonded abrasives industry, technological advancements, and changes in market demand, their shapes and applications are constantly expanding, and their sizes are also increasing.

As the system grows larger, establishing a dimensional system for bonded abrasives through a single standard becomes increasingly difficult and impractical.

Since.1999, ISO/TC29/SC5 has established a new dimensional system for bonded abrasives through scientific and reasonable classification, and has published [the relevant documents/reports].

The ISO 603 series standards. GB/T 4127 "Dimensions of Bonded Abrasives" has adopted the ISO 603 series standards since its second revision, and is proposed to be revised by ten...

It consists of eight parts.

---Part 1: External Cylindrical Grinding Wheel (Workpiece Clamped Between Centers). The purpose is to specify the external cylindrical grinding wheel (workpiece clamped between centers).

Commonly used nominal dimensions.

---Part 2: Centerless Cylindrical Grinding Wheels. The purpose is to specify the commonly used nominal dimensions of centerless cylindrical grinding wheels.

---Part 3: Internal Grinding Wheels. The purpose is to specify the commonly used nominal dimensions of internal grinding wheels.

---Part 4: Peripheral Grinding Wheels for Surface Grinding. The purpose is to specify the commonly used nominal dimensions of peripheral grinding wheels for surface grinding.

---Part 5: Face Grinding Wheels for Surface Grinding. The purpose is to specify the commonly used nominal dimensions of face grinding wheels for surface grinding.

---Part 6: Grinding wheels for tool grinders and tool chambers. The purpose is to specify the commonly used nominal dimensions of grinding wheels for tool grinders and tool chambers.

---Part 7: Manually Operated Grinding Wheels. The purpose is to specify the commonly used nominal dimensions of manually operated grinding wheels.

---Part 8: Deburring, Roughing, and Coarse Grinding Wheels for Stationary Machines. The purpose is to specify the deburring, roughing, and coarse grinding wheels for stationary machines.

Commonly used nominal dimensions for coarse grinding wheels.

---Part 9: Heavy-Duty Grinding Wheels. The purpose is to specify the commonly used nominal dimensions of heavy-duty grinding wheels.

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---Part 10: Honing and Superfine Grinding Stones. The purpose is to specify the commonly used nominal dimensions of honing and superfine grinding stones.

---Part 11: Hand-held polishing stones. The purpose is to specify the commonly used nominal dimensions of hand-held polishing stones.

---Part 12: Deburring and Grinding Wheels for Vertical Grinding Machines. The purpose is to specify deburring and grinding wheels for vertical grinding machines.

Commonly used nominal dimensions.

---Part 13: Deburring and Grinding Wheels for Vertical Grinding Machines. The purpose is to specify the deburring and grinding wheels for vertical grinding machines.

Commonly used nominal dimensions.

---Part 14: Deburring, Roughing, and Coarse Grinding Wheels for Angle Grinding Machines. The purpose is to specify the deburring, roughing, and coarse grinding wheels for angle grinding machines.

Commonly used nominal dimensions for coarse grinding wheels.

---Part 15: Cutting Wheels for Stationary or Mobile Cutting Machines. The purpose is to specify the cutting wheels for stationary or mobile cutting machines.

Common nominal dimensions of grinding wheels.

---Part 16: Cutting Wheels for Handheld Power Tools. The purpose is to specify common formulas for cutting wheels used in handheld power tools.

Dimensions.

---Part 17: Shanked Grinding Heads. The purpose is to specify the commonly used nominal dimensions of shanked grinding heads.

---Part 18: Grinding Wheels for Edging Flat Glass. The purpose is to specify the commonly used nominal dimensions of grinding wheels for edging flat glass.

Bonded abrasive dimensions Part 9: Heavy-duty grinding wheels

1 Scope

This document specifies the nominal dimensions and markings for the following bonded abrasives, in millimeters.

---Type 1.Flat grinding wheel.

The bonded abrasives specified in this document are suitable for deburring and rough grinding any surface of a workpiece. The workpiece and the grinding wheel are mechanically operated.

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