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

GB/T 16458-2021

Replacing GB/T 16458-2009

Terminology for abrasives and abrasive products

磨料磨具术语

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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 of Standardization Documents" Drafting. This document replaces GB/T 16458-2009 "Terms of Abrasives". Compared with GB/T 16458-2009, the main technical changes are as follows:

a) Changed "abrasive", "natural abrasive", "abrasive grain", "fine powder", "free abrasive grain", "particle size", "particle size number", "particle size composition", and "bulk density" Definitions of terms such as "capillary phenomenon", "brittleness", "single crystal", and "polycrystalline" (see 3.1.1, 3.1.2, 3.1.4, 3.1.4.1, 3.1.4.2, 3.1.5, 3.1.5.1, 3.1.5.2, 3.1.6, 3.1.7, 3.1.11, 3.1.13, 3.1.14, 2009 version 2.1.1, 2.1.2, 2.1.4, 2.1.4.2~2.1.4.3, 2.1.5, 2.1.5.1, 2.1.5.2, 2.1.6, 2.1.7, 2.1.11, 2.1.13, 2.1.14); deleted "coarse abrasive grains" Terms such as "mixed particle size", "physical corundum" (see 2.1.4.1, 2.1.5.3,

2.1.15 in the 2009 edition); the term "cleanliness" has been added (See 3.1.16);

b) "Ordinary abrasives", "natural corundum", "brown corundum", "white corundum", "microcrystalline corundum", "chromium corundum", "zirconium corundum", "black corundum" and "magnetism" have been changed. Definitions of terms such as "sexual abrasives" (see 3.2.1, 3.2.2, 3.2.4.1, 3.2.4.2, 3.2.4.4~3.2.4.7, 3.2.13, 2009 edition 2.2.1, 2.2.2, 2.2.5.1, 2.2.5.2, 2.2.5.4~2.2.5.7, 2.1.17); delete the term "emery" (see the 2009 edition 2.2.3); The terms "semi-brittle corundum", "calcined abrasive", "coated abrasive" and "stacked abrasive" have been added (see 3.2.4.8, 3.2.10~ 3.2.12);

c) "Super-hard abrasive", "Diamond", "Single crystal diamond", "Polycrystalline (polycrystalline) diamond" and "Polycrystalline (polycrystalline) diamond composite sheet" are changed. "Microcrystalline diamond", "Nano diamond", "Cubic boron nitride", "Single crystal cubic boron nitride", "Polycrystalline (polycrystalline) cubic boron nitride composite sheet" Definitions of terms such as "microcrystalline cubic boron nitride" and "nano cubic boron nitride" (see 3.3.1, 3.3.2, 3.3.5~3.3.9, 3.3.14, 3.3.15, 3.3.17~3.3.19, 2.3.1, 2.3.2, 2.3.5~2.3.9, 2.3.12, 2.3.13, 2.3.15~

2.3.17 of the.2009 version); The names and definitions of terms such as "Chemical Vapor Deposition Single Crystal Diamond" and "Chemical Vapor Deposition Polycrystalline Diamond" have been changed (see 3.3.10.1, 3.3.10.2, 2.3.10.1,

2.3.10.2 of the.2009 edition); deleted "coated diamond abrasives" and "coated diamond abrasives" "Cubic boron nitride abrasive" and other terms (see 2.3.11,

2.3.18 in the.2009 edition); added "plated (coated) diamond" and "large single crystal gold Terms such as "hard stone", "cultivated diamond", "plated (coated) cubic boron nitride" (see 3.3.11~3.3.13, 3.3.20);

d) Changed "abrasive tools", "ceramic bond", "low temperature bond", "abrasive grain rate", "unbalanced amount", "rotation test", "grinding wheel peripheral speed" "(Grinding wheel) maximum working speed", "self-sharpening", "passivation", "high-speed grinding wheel", "ultra-high-speed grinding wheel" and other terms are defined (see 4.1.1, 4.1.7.1.1, 4.1.7.1.1.2, 4.1.8, 4.1.14, 4.1.17, 4.1.19~4.1.24, 2009 version 3.1.1, 3.1.7.1.1, 3.1.7.1.1.2, 3.1.8, 3.1.14, 3.1.16, 3.1.18~3.1.21, 3.2.6.2, 3.2.6.3); added "safe speed test" and "rupture speed test" "Side load capacity", "single-point lateral load", "three-point lateral load", "lateral impact resistance" and other terms (see 4.1.17.1, 4.1.17.2, 4.1.18, 4.1.18.1~4.1.18.3);

e) "Cylinder grinding wheel", "single bevel grinding wheel", "double bevel grinding wheel", "single-sided concave grinding wheel", "double-sided concave grinding wheel", "cup grinding wheel" and "double cup" are changed. "Shaped Grinding Wheel", "Bowl Shaped Grinding Wheel", "Dish Shaped Grinding Wheel", "Saucer Shaped Grinding Wheel", "Single Cone Grinding Wheel", "Double Cone Grinding Wheel", "Single Concave Single Cone Grinding Wheel" "Single Concave Cone Grinding Wheel", "Double Concave Cone Grinding Wheel", "Single Concave Double Cone Grinding Wheel", "Double Concave Cone Grinding Wheel", "Cymbal Grinding Wheel", "Single Cone Grinding Wheel" English names of 20 terms such as "face convex grinding wheel" and "double convex grinding wheel" (see 4.2.1.2~4.2.1.19, 4.2.1.24, 4.2.1.25, The.2009 version of 3.2.1.2~3.2.1.19, 3.2.1.21, 3.2.1.22); the Chinese and English terms of "bolt-fastened flat grinding wheel" have been changed Name (see 4.2.1.22, 2009 version 3.2.1.20); changed "grindstone", "magicite grindstone", "rice milling wheel", and "heavy load grinding sand" Definitions of terms such as "wheel", "steel ball grinding wheel", "deep-cutting slow feed grinding wheel", "cutting grinding wheel", "pulp grinding stone" and other terms (see 4.2.3, 4.2.3.5, 4.2.6.1~4.2.6.3, 4.2.6.5, 4.2.6.7, 4.2.6.11, 2009 version 3.2.3, 3.2.3.6, 3.2.6.1, 3.2.6.4, 3.2.6.5, 3.2.6.7, 3.2.6.9, 3.2.6.13); Deleted "sintered corundum grinding stone", "pulp grinding block", "sintered corundum grinding wheel" and "ordinary abrasive dressing" "Tools" and other terms (see 3.2.3.4, 3.2.6.14~

3.2.6.16 in the.2009 edition); added "cone cymbal grinding wheel", "bonding or clamping Use the terms such as disc grinding wheel, "bolt-fastened cylindrical grinding wheel", "single-sided convex and single-sided concave grinding wheel" (see 4.2.1.20, 4.2.1.21, 4.2.1.23, 4.2.1.26);

- f) "Matrix", "Concentration", "Metal Bond", "Diamond Edge Grinding Wheel", "Diamond Cutting Grinding Wheel", "Sawtooth", and "Diamond Wire Saw" have been changed. Definitions of terms such as "diamond dressing tool", "diamond fine grinding disc", "electroplated diamond file" and other terms (see 4.3.1.2, 4.3.1.5, 4.3.1.6, 4.3.2.1.3.1, 4.3.2.2.1, 4.3.2.2.2.1, 4.3.2.2.4, 4.3.2.3, 4.3.2.4, 4.3.4.2, 2009 edition 3.3.1.2, 3.3.1.7, 3.3.1.8, 3.3.2.1.3.1, 3.3.2.2.1, 3.3.2.2.2.1, 3.3.2.2.4, 3.3.2.3, 3.3.2.3.3, 3.3.4.2) ;change The name and definition of the term "diamond milling and grinding wheel" (see 4.3.2.1.3.2, 3.3.2.1.3.2 in the 2009 edition); "diamond string The term "beads" adds "diamond grinding ring" as an allowable term (see 4.3.2.2.4.1, 3.3.2.2.4.1 in the 2009 edition); adds "gold Terms such as "hard-stone thin-wall drill bit", "electroplated diamond wire", "set tool" (see 4.3.2.5, 4.3.4.3, 4.3.5);
- g) The definitions of the terms "binder", "sand roll", "sand disc with dust removal hole", "sand disc" and "sharp wheel" have been changed (see 4.4.1.3, 4.4.6, etc.) 4.4.8.5, 4.4.9, 4.4.10, 3.4.1.3, 3.4.5, 3.4.7.5, 3.4.7.7,

1 Scope

GB/T 16458-2021 is the Chinese national standard on terminology for abrasives and abrasive products, 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 21 May 2021 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 December 2021. Classification: ICS 25.100.70, CCS J43. 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 document defines general terms in the field of abrasives and various abrasives and abrasives, and describes their definitions (or descriptions). This document applies to abrasives, abrasive tools, grinding processing and related industries.

2 Normative references

There are no normative references in this document.

3.1 General terms

3.1.1 Abrasive Materials that play a cutting role in grinding (including grinding and polishing) and cutting.

3.1.2 Naturalabrasive Abrasive made from natural ore after sorting, crushing, grading or

other processing.

3.1.3 Artificialabrasive Artificially refined or synthetic abrasives.

3.1.4 Abrasive grain; abrasive grain Abrasive particles.

3.1.4.1 Micropowder microgrit;micropowder F230~F2000 (P240~P5000, J240~J8000)
Ordinary abrasive grit with grit size or M50/70~M0/

0.25 grit Super-hard abrasive abrasive grains.

3.1.4.2 Free abrasive loosegrain Abrasive particles for grinding and cutting in a free state.

3.1.4.3 Fixed grain Abrasive grains fixed with a binder (adhesive).

Note. Corresponds to free abrasive particles.

3.1.5 Grainsize; gritsize A measure of the size of abrasive particles.