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

GB/T 45326-2025

Extra coarse grain cemented carbide tips for engineering

超粗晶粒硬质合金工程齿

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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. 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 was proposed by China Nonferrous Metals Industry Association. This document is under the jurisdiction of the National Technical Committee on Standardization of Nonferrous Metals (SAC/TC243). This document was drafted by: Zhuzhou Cemented Carbide Group Co., Ltd., Zigong Cemented Carbide Co., Ltd., Zhuzhou Kent Cemented Carbide Co., Ltd. Co., Ltd., Zhejiang Dewei Cemented Carbide Manufacturing Co., Ltd., Zhejiang Hengcheng Cemented Carbide Co., Ltd., Zhuzhou Xinda Machinery Technology Co., Ltd. Limited company. The main drafters of this document are. Qin Wenguang, Yao Xingwang, Gong Bin, Rao Chengyi, Wu Xiang, Zhao Shengzhi, Yang Sheng, Li Ying, Wu Jianguo, Chen Min, Guo Guangfu, Guo Weibo, Huang Chun, Liu Nengwen, Huang Can. Ultra-coarse grain cemented carbide engineering gear

1 Scope

GB/T 45326-2025 is the Chinese standard for extra coarse grained cemented carbide tips used in engineering tools, the inserts brazed into road planing picks, mining and tunnelling bits, trencher teeth and drilling tools. The grain size is the whole point of the grade: a coarse tungsten carbide grain with a high cobalt binder gives up hardness in exchange for the toughness and thermal shock resistance that an impact tool needs, and the tip fails by fracture rather than by wear if the microstructure is wrong. The standard sets the grades and their designation, the shapes and dimensions and their tolerances, and the requirements: the composition, the grain size and the microstructure including the porosity and the free carbon or eta phase that must not be present, the density, the hardness, the transverse rupture strength and the coercive force and magnetic saturation by which the binder is checked. It then gives the test methods, the inspection rules and the marking and

packaging. It takes effect on 1 September 2025.

This document specifies the model designation rules and typical product models and dimensions, technical requirements, test methods, and specifications of ultra-coarse grain cemented carbide engineering gears. methods, inspection rules, marking, packaging, transportation, storage, accompanying documents and order contents. This document is applicable to ultra-coarse grained cemented carbide engineering teeth with an average grain size of tungsten carbide (WC) greater than 6.0 μ m in cemented carbide.

2 Measurement of WC grain size

GB/T 3851-2015 Determination method for transverse rupture strength of cemented carbide

GB/T 5242 Inspection rules and test methods for cemented carbide products

GB/T 5243 Marking, packaging, transportation and storage of cemented carbide products

3 Terms and definitions

There are no terms or definitions that require definition in this document.

4 Model designation rules and typical product models and sizes

4.1 Model designation rules The product model consists of the series type code, engineering tooth shape code, diameter code, height code, bottom chamfer angle code, bottom chamfer angle code, It is composed of height code, bottom air hole shape code and additional information code. See the examples for each component. Example. Y V30.02450-G05Q/JL Indicates series type. Y indicates engineering gear series products. Indicates the shape of the engineering tooth. J represents a cylindrical tooth shape, C represents a mushroom tooth shape, and V represents a conical tooth shape. Indicates the major diameter (D), in millimeters, using two integers plus one decimal place. If the number is less than two integers, add "0" in front to make up for the two decimal places. Indicates the minor diameter (d), in millimeters, with two integers. If it is less than two integers, add "0" in front to make up the difference. This position is omitted for cylindrical tooth shape. Indicates height (H), in millimeters, with two integers. If it is less than two integers, add "0" in front to make up for the two digits. represents the angle of the bottom chamfer of the engineering tooth (theta), I represents the angle with the axis line is 15°, E represents the angle with the axis line is 18°, F represents the angle with the axis line is 30°, G means the angle with the axis is 45°, and X means other angles with the axis or other bottom shapes. It means 10 times of the actual height (h) of the bottom chamfer of the engineering tooth. If it is less than two digits, add "0" in front to make up for the two digits. Indicates the shape of the air hole at the bottom of the engineering tooth. Q indicates a spherical hole, Z indicates a conical hole, J indicates a pointed hole, and T indicates other shapes. This position is

default when there is no air hole. Indicates additional information code, 1 to 3 characters, used when necessary, such as "JL" indicates the buyer's code.

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