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

GB 18955-2003

Replacing GB/T 18955-2003

**Safety of woodworking tools - Milling tools, circular saw blades
(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 replaces GB/T 18955-2003 "Safety Cutting Tools for Woodworking. Milling Cutters and Circular Saw Blades". Compared with GB/T 18955-2003, it includes the following changes.

Aside from structural adjustments and editorial changes, the main technical changes are as follows.

- The normative references have been modified (see 5.1.4.1 and 5.1.6, and 6.1.5.1, 6.2.4.2 and 6.2.5 in the 2003 version);
- Terminology and definitions have been changed (see Chapter 3, Chapter 3 of the 2003 edition);
- The material notation for the cutting parts has been changed (see Chapter 4, Chapter 4 of the 2003 edition);
- The requirements for the "safety factor" have been changed (see 5.1.1, 6.1.1 in the 2003 version);
- Added the requirement for the "location of the chip breaker" (see 5.1.2.3);
- The requirement for "minimum clamping length" has been removed (6.1.4 in the 2003 version);
- The requirement for "rebound speed ratio" has been removed (see 6.2.1.2 in the 2003 version);
- The requirement for "blade extension" has been changed (see 5.2.3, 6.2.1.2 in the 2003 version);
- The requirement for "springback test of end mills" has been removed (see 6.2.1.6 in the 2003 version);
- The markings on the knives have been changed (see Chapter 6, Chapter 7 in the 2003 edition);
- Usage information has been changed (see Chapter 7, Chapter 8 in the 2003 edition);
- The bounce test performed on a standard test bench has been removed (see Appendix A of the 2003 edition);
- The Palmqvist fracture toughness test has been added (see Appendix C).

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 Woodworking Machine Tools and Cutting Tools (SAC/TC84).

1 Scope

This document specifies circular saw blades, perforated end mills, shank end mills, and other cutting tools for woodworking machines used for cutting wood and materials with similar physical properties to wood.

Safety requirements for end mills integrated with the spindle (hereinafter referred to as "cutting tools") are described, along with corresponding testing and safe operating methods, and specifications for marking and maintenance.

This document covers aspects such as protection and handling. It does not address any hazards related to the shank strength of end mills.

This document covers the knife-related hazards listed in Appendix A (Hazards List).

This document applies to the design, manufacture, and use of cutting tools.

This document does not apply to drills, eccentric single-cut milling cutters, milling cutters with a cutting circle diameter less than 16mm, lathes using rotary cutters, and copying lathes.

The design, manufacture, and use of cutting tools on beds and cutting tools manufactured before the date of this document's publication.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included.

For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies.

This document.

GB/T 1800.2-2020 Product Geometric Specification (GPS) - Linear Dimensional Tolerances - ISO Notation System Part 2: Standards Tolerance zone designations and limit deviation tables for holes and shafts
GB/T 7997-2014 Vickers Hardness Test Method for Cemented Carbide
GB/T 9239.1-2006 Mechanical Vibration Constant-State (Rigid) Rotor Balancing Quality Requirements Part 1: Specifications and Balancing Tolerances test
GB/T 14388-2010 Carbide Circular Saw Blades for Woodworking

3 Terms and Definitions

The following terms and definitions apply to this document.

A thin, circular blade that is installed on a woodworking circular saw or other woodworking machine tool to machine or weld saw teeth onto the outer circumference of the saw body.

Solid tool; one-piece tool A cutting tool in which the cutting part and the tool body are integrated as a single unit.

Welding tool composite tool; tipped tool A cutting tool in which the material to be cut is welded to the tool body.

Assembly tool builtuptool; complex tool A cutting tool in which the cutting part is mounted on the tool body.