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

GB/T 38192-2019

**Injection molding plastic cylindrical gears tolerance classification
system - Definitions and allowable values of deviations relevant to
flanks of gear teeth and double flank radial composite test**

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

1 Scope

This standard stipulates the deviation of the same side tooth surface and the radial comprehensive deviation of the injection molded plastic cylindrical gear (referred to as "injection gear" or "gear").

Poor terminology, precision architecture, and allowable values.

This standard applies only to the deviation elements of a single gear, not to the gear pair.

This standard specifies nine tolerance levels, from 4 to 12, depending on the characteristics of the precision of the injection molded gear. 5.3 tolerance metering

Calculate the formula. These tolerances can be applied to the following ranges.

$5 \leq z \leq 1000$

$0.5\text{mm} \leq d \leq 280\text{mm}$

$0.1\text{mm} \leq m_n \leq 3.5\text{mm}$

$0.2\text{mm} \leq b \leq 40\text{mm}$

$\beta \leq 45^\circ$

among them.

z --- number of teeth;

d --- indexing circle diameter;

m_n --- normal modulus;

b --- tooth width (axial);

beta --- helix angle.

This standard does not include the design and surface structure of the gears.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article.

Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 3374.1 Gear terms and definitions Part 1. Geometric definition

GB /Z 18620.1 GB /Z 18620.1 Specification for the inspection of cylindrical gears - Part 1

GB /Z 18620.2 Specification for the implementation of cylindrical gears - Part 2. Radial total deviation, radial runout, tooth thickness and backlash

test

GB/T 24762-2009 Product Geometry Specifications (GPS) Image measuring instrument acceptance test and retest detection

3 terms, definitions and symbols

The following terms, definitions and symbols defined in GB/T 3374.1 apply to this document.

3.1 Basic terms and symbols

Some terms are defined as shown in Figure 1.