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

GB/T 12967.1-2020

Replacing GB/T 12967.1-2008

**Test methods for anodic oxidation coatings and organic
polymer coatings of aluminium and aluminium alloys-Part 1:
Measurement of abrasion resistance**

铝及铝合金阳极氧化膜及有机聚合物膜检测方法 第1部分：耐磨性的测定

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Foreword

GB/T 12967 "Aluminum and aluminum alloy anodic oxide film and organic polymer film detection method" is divided into five parts.

- 1.Determination of wear resistance;
- 3.Copper oxide accelerated salt spray test (CASS test) of oxide film;
- 4.Determination of resistance to ultraviolet light of colored anodized films;
- 5.Deformation method to evaluate the crack resistance of anodized film;
- 6.Visual observation method to check the color difference and appearance quality of the colored anodized film. This part is Part 1 of GB/T 12967. This section was drafted in accordance with the rules given in GB/T 1.1-2009. This part replaces GB/T 12967.1-2008 "Aluminum and aluminum alloy anodic oxide film detection methods Part 1.Measurement with a jet mill tester The average wear resistance of fixed anodized film", GB/T 12967.2-2008 "Aluminum and aluminum alloy anodic oxide film detection method Part 2.Use Wheel wear tester to determine the wear resistance and wear coefficient of anodized film" and GB/T 12967.7-2010 "Anodic oxidation of aluminum and aluminum alloys" Membrane testing methods. Part 7.Determination of the wear resistance of anodized films with a falling sand tester. This part takes GB/T 12967.1-2008 as Main, integrated part of GB/T 12967.2-2008 and GB/T 12967.7-2010, compared with GB/T 12967.1-2008, Apart from editorial changes, the main technical changes are as follows:
 - Modify the requirements of the standard sample of the jet grinding method (see 4.5.1, 6.1 of the.2008 edition);
 - Modified the requirements for the calculation of the spray grinding method (see 4.7, Chapter 7 of the.2008 edition);
 - Added the requirement of resistance method to judge the end point of the test (see 4.6.3, 5.6.3);

--- Increased the requirements of instruments and equipment in the jet grinding method (see 4.2.2, 4.2.3, 4.2.4, 4.2.5);

1 Scope

GB/T 12967.1-2020 is the Chinese national standard on test methods for anodic oxidation coatings and organic polymer coatings of aluminium and aluminium alloys-part 1: measurement of abrasion resistance, 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 2 June 2020 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 May 2021. Classification: ICS 25.220.20, CCS H20. 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.

2 Normative references

The following documents are essential for the application of this document. For dated reference documents, only the dated version applies to this article Pieces. For the cited documents without date, the latest version (including all amendments) applies to this document.

GB/T 2481.1-1998 Detection and marking of abrasive grain size composition for consolidated abrasives Part

GB/T 4100-2015 ceramic tiles

GB/T 4957 Non-conductive covering layer thickness measurement of non-conductive covering layer eddy current method

GB/T 8005.3 Terminology for aluminum and aluminum alloys Part

3 Surface treatment

GB/T 8170 Numerical Rounding Rules and Representation and Judgment of Limit Values

GB/T 9258.1-2000 Abrasive particle size analysis for coated abrasives Part