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

中华人民共和国国家标准

GB 5237.5–2008

Replace GB 5237.5–2004

Wrought aluminium alloy extruded profiles for architecture—

Part 5: PVDF coating profiles

铝合金建筑型材

第 5 部分：氟碳漆喷涂型材

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Contents

Foreword.....	1
1 Scope	1
2 Normative References	1
3 Terms and definitions	3
4 Requirements	4
4.1 Classification	4
4.2 Pretreatment	4
4.3 Chemical composition and mechanical properties.....	4
4.4 Dimension tolerance	5
4.5 PVDF coating properties	5
4.6 Appearance.....	7
5 Test methods.....	8
5.1 Chemical composition	8
5.2 Mechanical properties	8
5.3 Dimension tolerance	8
5.4 Coating performance	8
5.5 Appearance.....	13
6 Inspection rules	13
6.1 Inspection and acceptance	13
6.2 Batch	14
6.3 Inspection items	14
6.4 Sampling	14
6.5 Judgment for test result	15
7 Labeling, packaging, delivery, storage	17
8 Contract (or order) content	18

Foreword

In this part, article 4.5.3.1 and 4.5.5 are mandatory. Other contents are recommendatory.

There are six parts in GB 5237 'Wrought aluminum alloy extruded profiles for architecture':

- Part 1: Untreated profiles
- Part 2: Anodized profiles
- Part 3: Electrophoretic coating profiles
- Part 4: Powder coating profiles
- Part 5: PVDF coating profiles
- Part 6: Thermal barrier profiles

This part is the fifth part of GB 5237.

This part replace GB 5237.5-2004 *Wrought aluminum alloy extruded profiles for architecture part 5: PVDF coating profiles*.

This part is amended refer to AAMA 2650-2005 *Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminium Extrusions and Panels*.

The major technical differences between this part and GB 5237.5—2004 are:

- The time of Neutral salt spray corrosion resistance test of coatings specified 4000h, the same as AAMA 2605.
- Artificial accelerated weathering resistance adopt artificial Xenon-arc exposure accelerated aging test. The time of the test is 2000h.
- The time of heat and humidity resistance test of coatings specified 4000h, the same as AAMA 2605.

This part is proposed by the China Non-ferrous Metals Industry Association.

This part is under the jurisdiction of the State Administration of China for Standardization of Nonferrous Metals.

The departments with responsibility for this work are as follows: Guangdong Xingfa Aluminum Co.,Ltd; Fujian Minfa Aluminum Co.,Ltd; Fujian Nanping Aluminum Co.,Ltd; National Quality Supervision and Inspection Center for Nonferrous Metals; Standard Research Division China Nonferrous Metals Standards and Metrology Research Institute; Guangdong Jianmei Aluminum Profile Factory Co., Ltd.

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The previous versions of the standard replaced by this part are:

— GB 5237. 5-2000, GB 5237.5-2004.

Wrought aluminium alloy extruded profiles for architecture—

Part 5: PVDF coating profiles

1 Scope

This part specifies requirements, test methods, inspection regulations, packaging, labeling, transportation storage and contents of contract (or order) of wrought aluminum alloy extruded profiles with fluorine carbon paint electrostatic spraying for architecture.

This part applies to the coatings of Polyvinylidene Fluoride, wrought aluminum alloy extruded profiles for architecture (hereafter referred to as profiles).

The same purpose and the same surface treatment of other aluminum alloy extruded profiles may apply to this part.

2 Normative References

The articles contained in the following documents have become this standard when they are quoted herein. For the dated documents so quoted, all the modifications (excluding corrections) or revisions made thereafter shall not be applicable to this Standard. For the undated documents so quoted, the latest editions shall be applicable to this Standard.

GB/T 228-2002 Metallic materials—Tensile testing at ambient temperature

GB/T 1732 Determination of impact resistance of film

GB/T 1740 Determination of resistance to heat and humidity of paint films

GB/T 1766 Method of evaluation of degradation (both exterior and accelerated) of paint films

GB/T 1865-1997 Paints and varnishes—Artificial weathering and exposure to artificial radiation--Filtered xenon-arc radiation

GB/T 3199 Wrought aluminum and aluminum alloy products-Packing, marking, transporting and storing

GB/T 4957 Non-conductive coatings on non-magnetic basis metals—Measurement of coating thickness—Eddy current

GB 5237.1 Wrought aluminum alloy extruded profiles for architecture—Part 1: Untreated profiles

GB/T 5237.4-2008 Wrought aluminum alloy extruded profiles for architecture —Part4: Powder coating profiles

GB/T 6461 Methods for corrosion testing of metallic and other inorganic coatings on metallic substrates— Rating of test specimens and manufactured articles subjected to corrosion tests

GB/T 6682 Water for analytical laboratory use—Specification and test methods

GB/T 6739 Paints and varnishes—Determination of film hardness by pencil test

GB/T 8013.3-2007 Anodic oxide coatings and organic polymer coatings on aluminum and its alloys—Part 3: Organic polymer coatings

GB/T 9276 Methods of exposure to natural weathering of coating

GB/T 9286 Paints and varnishes—Cross test for films

GB/T 9754 Paints and varnishes-Determination of specular gloss of non-metallic paint films at 20°, 60° and 85°

GB/T 9761 Paints and varnishes—Visual comparison of the color of paints

GB/T 10125 Corrosion tests in artificial atmospheres salt spray tests

GB/T 11186.2 Methods for measuring the color of paint films — Part 2: Color measurement

GB/T 11186.3 Methods for measuring the color of paint films — Part 3: Calculation of color differences

GB/T 16585 Rubber, vulcanized—Test method of resistance to artificial weathering (Fluorescent UV lamp)

GB/T 20975 (all parts) Chemical analysis methods of aluminum and aluminum alloys

JC/T 480 Architectural calces powder

3 Terms and definitions

For the purpose of this standard, the following terms and definitions given in GB/T 8013.3-2007 shall apply.

3.1

Film

Film is solidified fluorine carbon paint coatings on the surface of metal base. It can be called coating too.

3.2

Exposed surfaces

Exposed surfaces — the profiles after processed fabricated and installed in the construction, the visible surfaces when they are open or close.

3.3

Thickness of coating

Thickness of coating is the thickness of solidified fluorine carbon paint coating on the surface of metal base.

3.4

Local thickness

Coating thickness on measuring part - The average measured value of measuring several times (not less than 3 times) at a part no more than 1cm² on the exposed surface.

3.5

Minimum local thickness

The minimum thickness of some local thickness measured on exposed surface of the



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