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

GB/T 18593-2010

Replacing GB/T 18593-2001

**Anti-corrosive painting of fusion bonded epoxy coating
powders**

熔融结合环氧粉末涂料的防腐蚀涂装

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Foreword

This standard replaces GB/T 18593-2001 "fusion bonded epoxy powder coating anti-corrosion coating." This standard compared with GB/T 18593-2001 main changes are as follows:

- a) an increase of 3.5 "structure" is defined;
- b) epoxy powder coating Specifications Table 1 an increase of "curing time" and "magnetic content," the two; Density test standard in Appendix A to GB/T 4472, volatile and gel time test standards respectively, by GB/T 16592 and GB/T 16995 to GB/T 6554;
- 2 Category 2 by the coating of a minimum thickness of 130μm to 150μm;
- d) coating physical performance indicators.
- Adds a layer of repair column;
- Canceled the first and third class coating at room temperature impact resistance index increased Table
- 3 Class 3 coating -30 °C impact indicators;
- Table 3 coating abrasion testing standards by the SY/T 0315 to GB/T 1768;
- Increase the bond strength values of Class 1 of the coating, the adhesive strength values of Class 3 coating was modified;
- Class 2 coating increases "Electrical strength", "volume resistivity", "penetration of chloride ions" selective index; Section porosity
- first and third class coating and interfacial porosity index from the Level 1 to Level 4 revised to 1 to 3;
- Increased 1, 2 class coating "distilled water absorption (60 °C, 15 days)," the test

content. Removed Appendix A "Distilled water" test the contents of the media.

e) increasing the "Test Process" and "type test" clause Category 1 coating (see

1 Scope

GB/T 18593-2010 is the Chinese national standard on anti-corrosive painting of fusion bonded epoxy coating powders, 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 9 August 2010 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 31 December 2010. Classification: ICS 25.220.60, CCS A29. 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.

This standard specifies the molten steel and other metal materials bonded epoxy powder coating anti-corrosion coating materials, process specifications, coating properties Requirements and test methods. This standard does not apply to decorative coating.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 1034 Plastics Determination of water absorption (GB/T 1034-2008, ISO 62.2008, IDT)

GB/T 1408.1 insulating materials electric strength test methods - Part 1. Tests at power frequencies (GB/T 1408.1-2006, IEC 60243-1. 1988, IDT)

GB/T 1410 solid insulating material volume resistivity and surface resistivity test method (GB/T 1410-2006,

IEC 60093. 1980, IDT) Determination of

GB/T 1768 Paints and varnishes rotating rubber wheel abrasion method (GB/T 1768-2006, ISO 7784.1997, IDT)

GB/T 1771 Paints and varnishes - Determination of resistance to neutral salt spray (GB/T

1771-2007, ISO 7253.1996, IDT)

GB/T 4472 chemical product density, relative density measurement General

GB 5749 drinking water health standards

GB/T 6329 Adhesives - Determination of tensile strength of butt joints (GB/T 6329-1996, eqv ISO 6922. 1987)

GB/T 6554 for electrical insulation - Part 2 composite resin-based reaction. Test methods for coating powders for electrical purposes Methods (GB/T 6554-2003,

IEC 60455-2-2. 1984, MOD)

GB 7692 Safety code for painting paint pretreatment process safety, ventilation and air purification

GB/T 8923 steel surface before painting Rust grades and preparation grades (GB/T 8923-1988, eqv ISO 8501-1. 1988)

3 Terms and Definitions

The following terms and definitions apply to this standard.

3.1 Fusion bonded epoxy powder coating fusionbondedepoxycoatingpowders Epoxy resin as the main film material of thermosetting fusion bonded powder coatings, also known as "fusion bonded epoxy powder coating", referred to in this standard