

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

中华人民共和国建筑工业行业标准

JG 149-2003

**External thermal insulation composite system based
on expanded polystyrene
膨胀聚苯板薄抹灰外墙外保温系统**

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Foreword

This Standard specifies the building energy saving product widely used in wall insulation.

This Standard is not equivalent to EOTA ETAG 004 *Guideline for European Technical Approval of External Thermal Insulation Composite Systems with Rendering*, ONORM B6110 *Outer wall thermal insulation system with adhesion power fabricated of polystyrene particle foam and thin-wall plaster*, CEN/TC 88/WG N166 *External thermal insulation composite systems*, ICBO ES AC24 *Acceptance Criteria for Exterior Insulation and Finish Systems*. According to domestic actual situation, part technical performance requirements have been adjusted.

For testing method, this Standard is not equivalent to EIMA 101.86 *Standard Test Method for Resistance of Exterior Insulation and Finish Systems*, ASTM D 2794-93 *Standard Test Method for Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact)*, prEN 13497 *Determination of the resistance to impact of external thermal insulation composite systems (ETICS)*, EIMA101.01 *Test method for external thermal insulation and finish system frost resisting*, prEN 13494 *Thermal insulation products for building applications. Determination of the tensile bond strength of the adhesive and of the base coat to the thermal insulation material*, ASTM E 2098-00 *Standard Test Method for Determining Tensile Breaking Strength of Glass Fiber Reinforcing Mesh for Use in Class PB Exterior Insulation and Finish Systems (EIFS), after Exposure to a Sodium Hydroxide Solution*, prEN 13496 *Thermal insulation products for building applications. Determination of the mechanical properties of glass fibre meshes*.

This Standard is first issued and implemented on July 01, 2003.

Article 5.3 “Expanded polystyrene shall be flame retardant” in this Standard is mandatory.

Annex A, B, C, D, E, F in this Standard is Normative.

This Standard is proposed by Research Institute of Standards & Norms of MOC

This Standard is governed by Technical Committee on building product and accessories of Standardization Administration of MOC.

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Participate units of this Standard: Monda Cooperation, Beijing Science and Technology Research Institute, Beijing Science and Technology Research Institute, Beijing Zhuzong Group Co., Ltd, Shanghai Sto Co., Ltd, Spesielle Arts Industrial Science and Technology (Suzhou) Co., Ltd, China Construction Technolgy Research Academy Construction Physics Research Institute, Beijing Zhenli High New Technology Co., Ltd, Beijing Gold Coast Ruirong Technical Development Co., Ltd, Fischer (Taicang) Fixings Co., Ltd, Saint-Gobain (China) Investment Co., Ltd, Shanghai Yongcheng Architecture Creative Co., Ltd, Beijing Leihao Energy-saving Engineering Co., Ltd, Zhuanghe Jiyan Paint Industries Co., Ltd, Xilide (china) Co., Ltd and Shanghai Ailu Building Materials Co., Ltd.

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External thermal insulation composite system based on expanded polystyrene

1 Scope

This Standard specifies the definition, classification, marking, requirements, test methods, inspection rules, manufacturer certificate and operating instruction manual of external thermal insulation composite system based on expanded polystyrene products, as well as packaging, transportation and storage of products.

This Standard is applicable to external thermal insulation composite system based on expanded polystyrene product used for industrial and civil building, the variety materials for system shall be supplied by manufacturer.

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 2828-1987 Sampling procedures and tables for lot-by-lot inspection by attributes (Apply to inspection of successive lots or batches)

GB 3186 Sampling paint products

GB/T 7689.5-2001 Reinforcements-Test method for woven fabrics-Part 5: Determination of tensile breaking force and elongation at break for glass fibre

GB/T 9914.3-2001 Test method for reinforcement products-Part 3: Determination of mass per unit area

GB/T 10801.1-2002 Moulded polystyrene foam board for thermal insulation

GB/T 13475-1992 Building element — Determination of steady-state thermal transmission properties—Calibrated and guarded hot box

GB/T 17146-1997 Test methods for water vapour transmission of building materials

GB/T 17671-1999 Method of testing cements--Determination of strength

JC/T 547-1994 Adhesives for ceramic wall and floor tiles

JC/T 841-1999 Alkali-resistant glass fiber mesh

JG/T 3049-1998 Putty for interior

3 Terms and Definitions

For the purposes of this Standard, the following definitions shall apply.

3.1 External thermal insulation composite systems based on expanded polystyrene (ETICS)

The insulation and finish system based on external buildings, consists of expanded polystyrene, adhesives and mechanical fixings, base coat, alkali-resistant fiberglass mesh and coating, etc. composite systems. The thickness of reinforcing protective coating of thin plastering should be controlled by: Ordinary type: 3mm to 5mm, reinforced type: 5mm to 7mm. This system connected with substrate by adhesive way, can also be equipped with mechanical fixings, the basic structures



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