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

LY/T 3217-2020

**Wood based structural insulated panels for buildings
(English Translation)**

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Foreword

This document is in accordance with GB/T 1.1-2020 "Guidelines for Standardization Work Part 1: Structure and Drafting Rules of Standardization Documents" Drafting of the regulations.

1 Scope

This document specifies the terms and definitions, requirements, test methods, quality control System, marking and packaging, transportation and storage.

This document is applicable to building structures that use molded polystyrene foam as the core material and wood-based structural panels as the surface material.

Structure insulation composite board.

2 Normative references

The following documents are indispensable for the application of this document. For dated reference documents, only the dated version is suitable Used in this document. For undated reference documents, the latest version is applicable to this document.

GB/T 4132 Thermal insulation materials and related terms GB/T 2828.1 Sampling

Inspection Procedures by Attributes Part 1: Batch Inspection Sampling Plan Retrieved by
Acceptance Quality Limit (AQL) GB/T 10801.1 Molded polystyrene foam (EPS) for thermal
insulation GB/T 13475 Determination of adiabatic steady-state heat transfer properties,
calibration and protective hot box method GB/T 22349 Plywood for wood structure cladding
GB/T 36785 Test Method for Wooden Cladding Panel Thermal Insulation Wall for Structure
GB 50005 Wood Structure Design Standard GB/T 50329 Standard Test Method for Timber
Structure JG/T 432 Building structure insulation composite board LY/T 2389 Oriented
strand board for light wood structure building cladding

3 Terms and definitions

The following terms and definitions defined in GB/T 4132 apply to this standard.

Wood based structural insulated panels for buildings A composite board composed of
molded polystyrene foam as the core layer and bonded wood-based structural panels on
both sides as the surface layer.

The building can be used as a load-bearing structure, a non-load-bearing structure and an
outer protective structure.

Wood based board for structural usage Load-bearing boards made of wood veneers,
shavings, etc., pressed and glued with adhesives, including structural plywood and
Oriented strand board is used as the surface layer of structural insulation composite board.

Core material

As the core layer, it is used as a thermal insulation material between the surface materials
of the structural thermal insulation composite board, which has the function of thermal
insulation.

Spline

Used for the edge connection of the thermal insulation composite board of the wood-based
surface material structure for construction or as a component of the edge sealing, located
in the thickness direction of the board Between the two surface layers. Common types
include specification lumber splines, oriented strand board splines, structural insulation
board splines, wood beam splines, Laminate splines and laminated veneer splines.

4.1 Structure

4.1.1

In addition to meeting the requirements of this standard, the structure of the wood-based
surface material structural thermal insulation composite panel for construction should also
comply with the current industry the relevant regulations of standard JG/T 432.

4.1.2

The surface layer should be wood-based structural panels of the same tree species or similar physical and mechanical properties, and the width of the two surface layers should be the same.

It should be the same thickness, and the edges of the two surface layers should be aligned with each other.

4.1.3

When the surface layer is oriented strand board, the direction of its strong axis shall be the same as the length direction of the structural insulation composite board of wood-based surface material for construction.

Consistent; when the surface layer is structural plywood, the direction along the grain of the surface board should be the same as the length of the structural insulation composite board of the wood-based surface material for construction the direction is the same.

4.1.4

The core layer should be filled between the two surface layers. When the wood-based surface material structural thermal insulation composite board for construction is used as a bending member, the core layer should not be extended in the span direction. The edge of the core layer should not extend beyond the edge of the surface layer.

4.2.1 Surface

4.2.1.1

The surface layer shall be wood-based structural panels, including structural oriented strand board and structural plywood.

4.2.1.2

When the surface layer is oriented strand board, its quality and performance indicators should meet the requirements of LY/T 2389; it is structural plywood at the same time, its quality and performance indicators should meet the requirements of GB/T 22349.

4.2.1.3

The thickness of the surface layer shall not be less than 11mm.

4.2.2 Core layer

4.2.2.1

The core layer shall be a molded polystyrene foam board.

4.2.2.2

The core material should meet the relevant requirements in GB/T 10801.1, and it should be a flame-retardant product, and its combustion performance should reach Class B1; apparent density should not be less than 18kg/m³; thermal conductivity should not be greater than 0.038 W/(m·K).

4.2.2.3

The thickness of the core layer shall not be less than 92mm.

4.2.3 Adhesive

The performance of the adhesive should meet the requirements of GB/T 50329 or related standards.

4.3 Appearance

See Table 1 for the appearance requirements of the thermal insulation composite board with wood-based surface material for construction.

4.4.1 Dimensions

4.4.1.1

The standard length of the structural insulation composite board with wood-based surface material for construction is 2440mm, 3050mm, 3660mm, 6100mm and 7320mm.

4.4.1.2

The standard width of the thermal insulation composite board with wood-based surface material for construction is 1220mm, 1830mm, and 2440mm.

4.4.1.3

The commonly used thicknesses of structural insulation composite panels with wood-based surface materials for construction are 114mm, 165mm, 210mm, 260mm, etc.

4.4.1.4

The special specifications and requirements of the thermal insulation composite board with wood-based surface material for construction can be determined through negotiation between the supplier and the buyer.

4.4.2 Processing deviation

The processing deviation of the thermal insulation composite board with wood-based surface material for construction shall meet the requirements of Table 2.