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**Preservative pressure-treated glulam
(English Translation)**

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Foreword

This document starts from the provisions of GB/T 1.1-2020 "Guidelines for Standardization Work Part 1: Structure and Drafting Rules of Standardization Documents" grass.

This document was proposed and managed by the National Wood-based Panel Standardization Technical Committee (SAC/TC 198).

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1 Scope

This document specifies the terms and definitions, classification, requirements, inspection requirements, inspection rules, and labeling and packaging of pressurized anti-corrosion treated glulam.

Loading, transportation and storage.

This document applies to glulam that has been pressurized with water-borne preservatives or organic solvent-based preservatives.

2 Normative references

The contents of the following documents constitute the indispensable clauses of this document through normative references in the text. Among them, dated reference documents, Only the version corresponding to that date is applicable to this document; for undated references, the latest version (including all amendments) is applicable to this document file.

GB/T 14019-2009 Terminology for Wood Preservation GB/T 17659.2-2018 Sampling and determination method for batch inspection of sawn timber. Part 2: Sampling and determination method for batch inspection of sawn timber GB/T 23229-2009 Water-borne wood preservative analysis method GB/T 26899-2011 Glulam for structural use GB/T 27651 Classification and requirements for the use of anticorrosive wood GB/T 27654 Wood preservative GB/T 33021-2016 Analysis method of organic wood preservatives triazole and benzimidazole GB 50005 Wood Structure Design Standard GB 50206 Construction Quality Acceptance Code for Timber Structure Engineering GB/T 50708-2012 Technical specification for glulam structure LY/T 1925 Anti-corrosion wood product labeling

3 Terms and definitions

The following terms and definitions defined in GB/T 14019-2009 and GB/T 50708-2012 apply to this document.

Structural laminated timber (Glulam) the wood products are laminated and glued along the grain direction with boards with a thickness of 20 to 45 mm. Also called plywood, or structural Glulam.

[Source. GB/T 50708-2012, 2.1.1] 3.2 Laminate laminations each layer of board that constitutes pressurized anti-corrosion treatment glulam.

Preservative pressure treatment in a closed container, under certain pressure, the anti-corrosion treatment of laminates or glulam.

Exposed sapwood

The sapwood along the length or cross section of glulam has at least two adjacent surfaces exposed to the air at the same time (Figure 1).

Figure 1 Schematic diagram of exposed sapwood and non-exposed sapwood

Penetration

The degree of penetration of the preservative (active ingredient) into the wood, including the depth of penetration of the preservative into the wood and the penetration rate of the preservative in the sapwood.

[Source. GB/T 14019-2009, 3.5.21]

4 Categories

According to the final use environment and exposure conditions of pressurized anti-corrosion treatment of glulam, as well as the biodegradation factor under different environmental conditions, the effect of pressurization the hazard degree of rot-treated glulam wood is classified into five categories. C1, C2, C3.1, C3.2, and C4.1.(See Table 1).

5.1.1 Shelves

The same tree species or different tree species with similar wood properties, good permeability and easy to do anti-corrosion treatment should be used as the laminate. All laminates the difference in moisture content should be < 5%. The quality of the laminate should meet the requirements of GB/T 26899-2011.

5.1.2 Adhesive

Should meet the requirements of GB/T 50708-2012.

5.1.3 Preservatives

Should meet the requirements of GB/T 27654.

5.1.4 Physical and mechanical properties

It shall meet the requirements of GB/T 26899-2011, GB 50005, and GB 50206.

5.2.1 Appearance quality

The surface of pressurized anti-corrosion treatment glulam should have no visible deposits of antiseptic, and no obvious defects such as cracks, twists, and bends.

5.2.2 Moisture content

The moisture content of pressurized anti-corrosion treatment glulam should be between 8% and 15% in the north and between 8% and 18% in the south.

It can also be agreed by both parties.

5.2.3 Physical and mechanical properties

The physical and mechanical properties of pressurized anti-corrosion treatment glulam shall meet the requirements of GB/T 26899.

5.2.4 Drug loading

The loading capacity of commonly used preservatives for pressurized preservative treatment of glulam should meet the requirements of Table 2. The loading capacity of other preservatives should comply with GB/T 27651 Requirements.

Note: NR means it is not recommended.

5.2.5.1 Category C1

The penetration rate of the preservative in the exposed sapwood should be $\geq 85\%$, and there is no requirement for the heartwood.

5.2.5.3 C3.1, C3.2 category

The penetration rate of the preservative in the exposed sapwood should be $\geq 90\%$ and meet one of the following conditions.

1) Glulam thickness ≤ 35 mm, preservative penetration on the exposed surface or end of the heartwood ≥ 5 mm; Glulam thickness > 35 mm, preservative Penetrate ≥ 8 mm on the exposed surface or end of the heartwood.

2) When preservatives are allowed to not penetrate the heartwood, it should be satisfied at the same time. In each laminate, the area of the heartwood (S1) is smaller than the area of the end face of the laminate (S1 S2) the depth (L1) does not exceed 50% of the end surface distance (L2), and the width (L3) does not exceed 50% of the distance between the two sides of the end surface (L4) (Figure

Figure 3 Schematic diagram of cross section of glulam laminate

5.2.5.4 Category C4.1

The penetration rate of the preservative in the sapwood should be $\geq 90\%$ and meet one of the following conditions.