

ZBS-JC1314 Product Brief Introduction

ZBS-JC1314 is a highly efficient and environmentally friendly halogen-free flame retardant specially designed for urea-formaldehyde glue for plywood, which mainly achieves flame retardant effect through phosphorus-nitrogen synergy. ZBS-JC1314 product is surface-modified by coupling agent, which has excellent dispersibility in urea-formaldehyde glue, and its flame-retardant board products have good bonding strength. It does not affect the operation time of the glue and there is no degumming. In the fire test, the flame is self-extinguishing and the amount of smoke is small. According to the test standard of GB8624-2012 "Classification of Building Materials and Combustion Performance", the flame retardancy can easily reach B1 level. Has passed many tests by customers, and has developed regional agents.

The advantage and difference of ZBS-JC1314

- ◆ It can be directly added to the urea-formaldehyde glue for use, and the process is simple, saving the drying site, labor and equipment costs.
- ◆ After the coupling agent treatment, it has good dispersibility in the glue, does not break the glue, and can increase the bonding strength of the board;
- ◆ The flame retardant has a microporous structure, which can adsorb part of formaldehyde, which can effectively reduce the formaldehyde release of the board;
- ◆ **Flame retardant effect can reach B1 level, good smoke suppression effect;**
- ◆ Halogen-free, non-toxic, environmentally friendly and low price.

Technical index

Appearance	white crystal
Whiteness	≥90
Phosphorus content /%	≥36.2
Nitrogen content /%	≥10.5
Decomposition temperature / °C	≥350
Moisture /%	≤0.3
Water-soluble	Slightly soluble

Processing Guide

- ◆ Adhesive coating: mix the urea-formaldehyde glue and ZBS-JC1314 with other additives at a ratio of 100: 30, and then apply it on the veneer.
- ◆ Cold pressing parameters of embryo: 12MPa, about 90min;
- ◆ Hot-pressing parameters: Hot-pressing temperature 110-120 °C, hot-pressing time depends on the thickness of the board (for example: 8mm thickness of hot-pressing time is 8min, that is, 1mm≈ 1min).

Main performance:

Performance	Standard			Test Results
Combustion growth rate index Figra0.2MJ, W / s	≤120			91.6
Elongation of flame lateral spread	< sample edge			meets standard requirements
Total heat release within 600s THR600, MJ	≤ 7.5			5.5
60s inner flame tip height Fs, mm	surface flame bombardment ≤ 150			38.0
	Edge flame bombardment ≤ 150			34.0
Burning drips within 60s	No burning drips ignite the filter paper			meets standard requirements
Flue gas generation rate index, m²/s²	Flue gas characteristics	S1	≅ 30	4.2
		S2	≅ 180	
		S3	Not reached s2	
Total smoke output in 600s, m2		S1	≅ 50	42.8
		S2	≅ 200	
		S3	Not reached s2	
Burning droplets / particles	No burning drips / particles in 600s			meets standard requirements
Test Standard: GB8624-2012 "Classification of Combustion Performance of Building Materials and Products"				

Packaging / storage / transport

- ◆ Small package: 25 kg; Large package: 500 kg
- ◆ Store in ventilated, dry and cool place, general chemical transportation and storage

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