## ZBS-JC1302 Product Brief Introduction

ZBS-JC1302 is a highly efficient and environmentally friendly halogen-free flame retardant developed for impregnated sheet materials. The flame retardant effect is achieved mainly by coacervating the carbon and blocking oxygen. ZBS-JC1302 product is modified by special surface treatment, it has excellent water solubility, its aqueous solution has high penetration rate in wood, and its flame retardancy can easily reach B1 level.

## The advantage and difference of ZBS-JC1302

- ZBS- JC1302 It is specially treated, with excellent water solubility and high solubility;
- ZBS- JC1302 Its aqueous solution is neutral, and will not corrode wood and board fixing metal parts;

## Technical index

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|---|---|
| **Appearance** | **white crystal** |
| **Phosphorus content /%** | **≥30.2** |
| **Decomposition temperature / ℃** | **≥320** |
| **Moisture /%** | **≤0.5** |
| **Water-soluble** | **excellent** |

## Processing Guide

- With soaking solution: mix water with ZBS-JC1302 at a ratio of 4: 1, stir to make the flame retardant powder fully dissolved;
- Soaking condition parameters: vacuum high pressure (0.8-1.2MPa), soaking for 1-4h (soaking time is determined according to the wood species and thickness).

## The specific operation reference is as follows:

1. Put the wood in a high-pressure impregnation tank, cover it, and evacuate it to 600-650 mm Hg for 30-60 minutes;

2. Open the valve connected to the flame retardant liquid storage tank, and rely on the vacuum to introduce the flame retardant liquid into the high-pressure impregnation tank. When the flame retardant is filled with the impregnation tank, release the vacuum and close the vacuum valve;

3. Slowly press to 0.8 ～ 1.2MPa and keep it for 1 ～ 4 hours. The retention time is determined by the wood species and thickness;

4. Flame retardant absorption: dry flame retardant / dry wood = 11 to 13%. Take 3 ~ 5 pieces of wood of

the same size in advance, label and weigh
(G0). Disperse the sample into the immersion tank. After immersion for a period of time, remove the sample and weigh it (G1).
= 25 * (G1-G0) / G0. If the amount of flame retardant absorption is insufficient, extend the dipping time.

5. Release the pressure, discharge the medicine, close the pressure valve and the valve connected to the flame retardant storage tank; evacuate to 600 to 650 mm Hg, and hold for 10 to 15 minutes

6. Remove the vacuum and remove the wood; dry to the proper moisture content.

## Main performance:

<table>
<tr><th>Performance</th><th colspan="3">Standard</th><th>Test Results</th></tr>
<tr><td>Combustion growth rate index Figra0.2MJ, W / s</td><td colspan="3">≤120</td><td>80.6</td></tr>
<tr><td>Elongation of flame lateral spread</td><td colspan="3">＜sample edge</td><td>meets standard requirements</td></tr>
<tr><td>Total heat release within 600s THR600, MJ</td><td colspan="3">≤ 7.5</td><td>5.4</td></tr>
<tr><td rowspan="2">60s inner flame tip height Fs, mm</td><td colspan="3">surface flame bombardment ≤ 150</td><td>36.0</td></tr>
<tr><td colspan="3">Edge flame bombardment ≤ 150</td><td>34.0</td></tr>
<tr><td>Burning drips within 60s</td><td colspan="3">No burning drips ignite the filter paper</td><td>Meets standard requirements</td></tr>
<tr><td rowspan="3">Flue gas generation rate index, m²/s²</td><td rowspan="6">Flue gas characteristics</td><td>S1</td><td>≦30</td><td rowspan="3">3.0</td></tr>
<tr><td>S2</td><td>≦180</td></tr>
<tr><td>S3</td><td>Not reached s2</td></tr>
<tr><td rowspan="3">Total smoke output in 600s, m2</td><td>S1</td><td>≦50</td><td rowspan="3">41.2</td></tr>
<tr><td>S2</td><td>≦200</td></tr>
<tr><td>S3</td><td>Not reached s2</td></tr>
<tr><td>Burning droplets / particles</td><td colspan="3">No burning drips / particles in 600s</td><td>meets standard requirements</td></tr>
<tr><td colspan="5">Test Standard: GB8624-2012 "Classification of Combustion Performance of Building Materials and Products"</td></tr>
</table>

## Recommended dosage:

| Substrate | Adding amount% | Flame retardant effect |
|---|---|---|
| **Plywood** | 25-30 | B1 |
| **Particle Board** | 23-29 | B1 |
| **MDF / Fiberboard** | 22-25 | B1 |

## Packaging / storage / transport

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