

Understanding and Managing Surface Residue on Burnblock® Impregnated Wood

1.

What Is The Surface Residue?

Upon receiving or unpacking pressure-impregnated wood with BURNBLOCK® fire retardant, you may observe a light white powder, haze, or minor salt crystallization residues on the wood surface, promoting some light colored spots/areas.

This visible substance consists of crystallized residual BURNBLOCK® solution (organic, non-toxic mineral salts). It is a normal, expected outcome of high-performance vacuum-pressure impregnation and dry-down.

Note: Surface salt accumulation is purely residual. It confirms the wood was deeply saturated with fire retardant solution during autoclave treatment.

2.

Why Does Efflorescence Occur?

During pressure impregnation, BURNBLOCK® is forced deep into the wood cell walls under high pressure. As the wood undergoes posttreatment kiln drying, moisture travels outward via capillary action to evaporate. This outward water movement carries a residual portion of the mineral salts to the wood outer surface, where they crystallize into a fine, powdery residue upon drying.

3.

Environmental & Safety Profile

Unlike traditional fire retardants containing toxic chemicals or heavy metals, BURNBLOCK® is an eco-friendly, non-hazardous formulation:

- ✚ Cradle to Cradle Certified® Gold: 100% organic, non-toxic minerals.
- ✚ pH Neutral & Non-Corrosive: Safe with metal fixings, stainless steel, and galvanized screws.
- ✚ Safe Handling: Non-irritating and harmless during cutting and installation.
- ✚ Biodegradable: No toxic chemical leaching or environmental hazards.

4.

Impact On Fire Performance

Does removing or cleaning residue affect fire safety? No. The wood's fire performance is achieved by active retardant salts retained inside the wood cellular fiber structure.

Cleaning the residual surface salts removes only unabsorbed external dust and does not compromise the core fire-retardant performance.

5.

Natural Weathering

The fire retardant superficial residue will be removed over time by natural weathering. Depending on the environmental conditions and exposure of the product, this is a process that naturally occurs without the need for interference if that is considered to be acceptable. The removal of the surface residue does not compromise the fire performance of the product as it is pressure impregnated throughout its thickness. If cleaning resulting from natural weathering is considered

6.

Surface Preparation & Cleaning Procedure

In case cleaning by natural weathering is not desired, the following procedure can be used:

1. **Surface Wetting:** Use water to wet the surface of the wood, without soaking it. A superficial wetting is enough to soften the residues prior to removal. Note that this is enough to remove a considerable portion if not all of the residues. Avoid high-pressure washing, which can damage the wood, or over-saturating it.
2. **Damp Wipe:** Remove the salt crusts in the wood grain or profiles by wiping it with a damp cloth, sponge or similar. Use water and not any chemical products or solutions. Test on a small area to ensure that no relevant damage occurs. Do not use abrasives.
3. **Drying & Surface Inspection:** Allow the timber to air-dry completely. Ensure the surface is clean, smooth, and free of loose dust prior to installation or topcoat application.

Surface
with Residue ↘

Surface after
Cleaning
Procedure ↘



Surface
with Residue ↘

Surface after
Cleaning
Procedure ↘



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