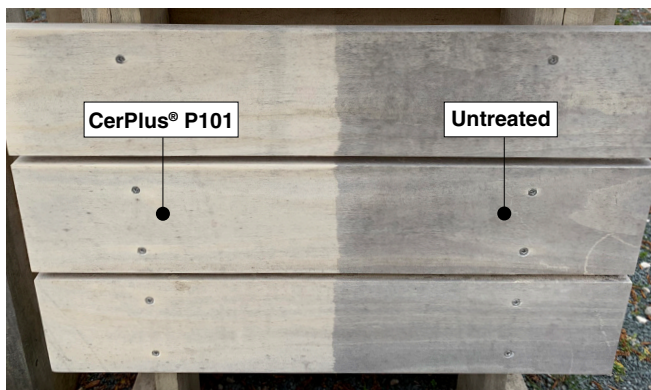


CerPlus®

SMART TREATMENT TO PROTECT WOOD APPEARANCE

CerPlus® P101 with Accoya® - preserving the natural beauty of new wood

CerPlus® P101 is an innovative smart treatment for protecting the appearance of new wood. It is manufactured by Energenics, a UK performance chemicals business that started as a spin out from Oxford University in the field of nanotechnology.



Test Rig, Accsys Technical Centre, Arnhem, the Netherlands
12 months weathering: South facing cladding panels

Accoya is an ultra high performance, sustainable wood, the material of choice for wood structures where longevity, structural integrity retention and environmental factors are key. It is manufactured by Accsys, the global leader in the manufacture and supply of acetylated wood.

Accoya wood is a preferred material in outdoor applications such as cladding, decking and garden structures and landscaping due to its visual appeal, sustainability attributes, and high performance properties such as durability and stability. Like all wood species, the natural weathering process arising from exposure to sunlight and moisture can lead to rapid changes in appearance:

- Fading and bleaching of the natural, light straw colour by sunlight.
- Surface degradation to a grey colour with a fibrous texture.
- Clusters of unsightly surface mould.

CerPlus® P101

- smart treatment to protect wood appearance

Using its proprietary technology Energenics has developed the innovative CerPlus® P101 smart treatment, providing a scientific breakthrough in helping to preserve the new appearance of exterior wood and reduce maintenance (patent applied).

It contains nanoparticles of a natural mineral known to be a highly effective UV absorber. These small particles penetrate deep into the wood surface where they chemically bond to the wood molecules providing long-lasting protection against sunlight. Once attached to reactive sites in the wood they block them from attack by water. The wood surface becomes hydrophobic, greatly reducing the ingress of rainwater and other moisture. As a result the surface growth of biological species like mould/fungi (which are dependent on water) is inhibited.

Benefits of CerPlus® P101:

- Provides long-lasting protection against fading and colour changes caused by sunlight.
- Makes wood surface water repellent, inhibiting biological growth (mould/fungi).
- Water-based
- No Biocides
- Minimal VOCs
- Non-Toxic
- Easily applied to the dry surface of new or restored wood using standard techniques like brushing, spraying, dipping or roller coating.
- Can be overcoated with traditional commercial wood coatings, oils or varnishes.



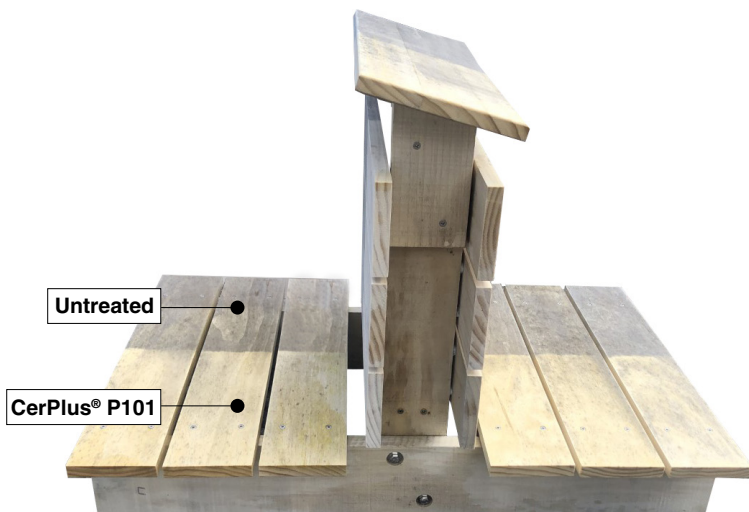
Where customers choose to use Accoya without paint or coatings, they can fully enjoy its natural beauty – both its looks and the feel of its smooth surface.

Over time the new light straw colour will change to a silver-grey patina due to the natural weathering processes associated with being outdoors, particularly exposure to sunlight and moisture. For customers who prefer to delay the

colour change and retain the light straw appearance of new Accoya for as long as possible, there is now the new option of treatment with **CerPlus® P101**. This can be applied both when new, and after cleaning (as part of a recommended maintenance programme) to sustain the new appearance for many years.

Performance Proven in Partnership – global weathering test programme

Working in close collaboration for over 3 years, technologists from Energenics and Accsys have evaluated and now proven the performance of CerPlus® P101 on Accoya. Using their expertise in outdoor testing, a standardised weathering test rig was designed to give a direct comparison between treated and untreated half panels of new Accoya in cladding and decking orientations and sunny and shaded aspects. Ten identical test rigs were built and located at different sites around the world in Europe, Asia, Australasia, and the USA.



Test Rig, Newtonmore, Scotland - 12 months weathering

After 12 months exposure a clear picture of enhanced performance emerged:

- CerPlus® P101 maintains the natural light straw colour of new Accoya for significant periods compared to untreated areas, for up to 18 months in some cases.
- CerPlus® P101 performs on all panel orientations but best results are seen on vertical cladding surfaces.
- Transitory dark discolouration due to surface mould & mildew development in more humid climates tends to be excluded on treated areas.
- A smooth surface finish is maintained with no fibre raising.
- When re-applied after cleaning, it maintains the natural light straw colour of Accoya. Surfaces not re-treated after cleaning become silver grey quite rapidly.
- When applied to a weathered silver-grey surface it freezes the position and negates/slows down future greying that normally follows.



Real World Case Study - Switzerland

CerPlus® P101 was applied to new Accoya used in a project for playground equipment in Switzerland. After almost a year the new light straw colour of the Accoya had been retained with minimal evidence of the onset of the transition to silver grey.

CerPlus®

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