



## KEIM LIGNOSIL® - COLOUR ON ACCOYA® SURFACES

JOINT PROJECT KEIM AND ACCOYA;  
STADTCASINO BASEL

# DEVELOPMENT OF SILICATE PAINT ON ACCOYA WOOD SURFACES

KEIM Mineral Paints were developed over 140 years ago and are used globally to provide extremely long lasting, protective and durable coatings with a reputation for being the best paints in the world.

KEIM paints penetrate and chemically bond with the mineral substrate onto which they are applied, becoming an integral part of the surface, whereas oil based paints merely form a skin on the surface. KEIM Mineral Paints are natural, water-borne liquid silicate paints which produce an extremely durable, colourfast, sustainable protective finish with high vapour permeability, which work in harmony with the environment.

For more than twenty years, the developers at KEIM have been working on the transfer of the success model of silicate paint to the substrate of wood within the framework of a research project, supported by well-known institutes.

With the development of the first mineral composite coating to protect wood from weather influences, KEIM engineered a durable, economical and aesthetic system. A European patent for the system and the products document those unique and innovative properties.

accoya 



# A NEW WAY OF THINKING ABOUT WOOD



## KEIM LIGNOSIL®-COLOUR

KEIM presents a wood-coating system that delivers cost-efficiency, beautiful appearance and unparalleled performance. The unique, innovative properties of the KEIM Lignosil system have been documented as a result being awarded the European patent for the system and product. KEIM Lignosil-Colour has also been awarded an innovation prize within the environmental fair "Oekofoire 2016".

## Naturally beautiful silver-grey wood facades

Accoya brings unprecedented reliability for timber; it is checked and trusted not to visibly swell, shrink or distort, with minimal movement. Highly durable, it withstands the test of any climate. And what's more, it stays that way – a 50 year above ground, and 25 year below ground and freshwater warranty are testament to the fact that you can expect to enjoy your Accoya wood for many decades to come.

Accoya is a highly proven product with testing from many different perspectives, on a worldwide basis. Many tests have been conducted in real life conditions, over many years.

Accoya is so reliable that for many years it has been, and continues to be used by scientists as the benchmark against which other treatments and modified timbers are measured.

## KEIM LIGNOSIL®-VERANO

With KEIM Lignosil-Verano, a silicate-based surface treatment has been developed that simulates a naturally beautiful, silver-grey patinised wood appearance from the very first day. As a result of consciously leaving out the protective function which is usually desirable in coatings, the applied Lignosil-Verano coat increasingly changes to natural grey over the course of time.



"Accoya wood was chosen to fulfill the constructional challenge, the architectural expectation and the façade's fine details."



KEIM and Accoya jointly developed & initiated a comprehensive sample testing programme on the outdoor test field of Accsys Technologies facility in Arnhem, the Netherlands in February 2017.

Tests have been performed on Accoya wood with all products of the KEIM Lignosil range. These tests have shown that the unique properties of both KEIM and Accoya are very well matched. A system that enhances each other's properties! As a result of these good results and cooperation, the Stadtcasino project in Basel was established.

The Accoya modification process ensures that the substrate retains its shape and is impervious to rotting. The finishing of the system with KEIM Lignosil strengthens the technical protection, while also preserving the characteristic structures of the wood. The extreme mattness and vibrancy of the paint layer creates a natural and rich appearance.

**System that enhances each other's properties**



#### APPLICATIONS AT STADTCASINO

The Accoya substrate is provided with a layer of KEIM Lignosil-Base or Lignosil Base-W. After the prescribed drying time, it is finished with two layers of KEIM Lignosil-Colour. KEIM Lignosil-Colour is available in all colours from the KEIM Palette-exclusive range.

Accoya substrates can also be treated excellently with the KEIM Lignosil Verano system; without primer in one or two layers. The system is available in 9 colour tones and 3 metallics.

# CASE STUDY: STADTCASINO BASEL

After four years of construction, the expanded, renovated and updated Stadtcasino Basel (Switzerland) reopened on 22 August 2020 with 1,100m<sup>2</sup> of Accoya wood cladding, inspired by the look of the original building's neo-Baroque stone architecture. The unparalleled dimensional stability of Accoya wood and the strong technical and aesthetic performance of KEIM Lignosil made it the ideal material to profile, join and coat in a way that could match the original styling from a distance.







Herzog & De Meuron architects re-envisioned the Stadtcasino's Stehlin concert hall as a new, fully independent building. When originally built in 1876, budget constraints severely curtailed construction, and tacked-on extensions in the 1930s did little to help. This meant redesigning the entire west half of the site, developing what was a smaller annex into what now looks like a natural completion of the original design to include an entrance, foyer, backstage area and facilities that the concert hall deserves. While the east side's historic stone masonry remains intact, the extension uses cleverly profiled and joined Accoya wood for its façade.

The architects approached engineers Pirmin Jung AG with a challenge: how to match the style of the original main building but with an interesting, surprising twist. From a distance the

similarity is remarkable, but when approaching closer the new extension's natural, sustainable provenance becomes clearer – the surprise is that it isn't stone at all, but innovative wooden siding.

Mario Hess, Structural Engineering Project Manager with Pirmin Jung, said: "Accoya wood was chosen to fulfill the constructional challenge, the architectural expectation and the façade's fine details. Its dimensional stability and durability were vital, and many other materials would be too heavy as well. The way Accoya works with KEIM Lignosil, while still retaining the unmistakable look and feel of real wood grain, was a real added bonus for this unique project."





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