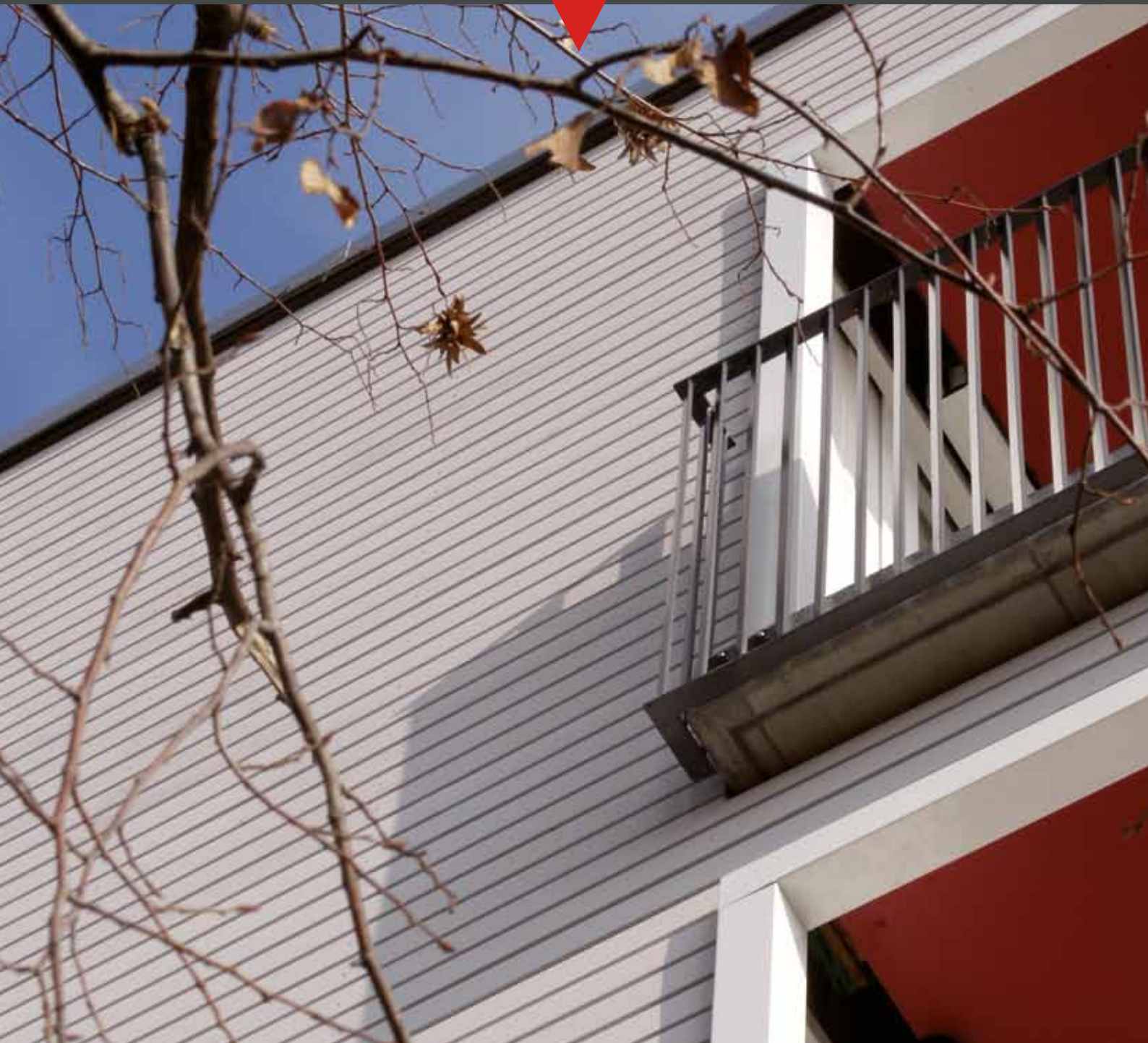


KEIM



KEIM LIGNOSIL[®]

MINERAL PAINT FOR WOOD -
AESTHETIC, DURABLE AND UNIQUE



WOOD – BUILDING MATERIAL WITH TRADITION AND FUTURE



A SUCCESS STORY

Wood is probably the oldest building material of mankind. It excels by high availability, easy handling and good indoor climate conditions. Properly handled wood lasts for centuries - countless wooden buildings worldwide are the impressive proof.

CO₂-NEUTRAL

Wood as renewable raw material is durable and lasting, it has good insulation properties and thus contributes to energy efficiency of buildings. It regulates humidity and absorbs pollutants from the room air. That way wood does not only create a better world climate but also a more pleasant indoor climate.

BUILDING MATERIAL OF THE 21ST CENTURY

Wood is experiencing a real renaissance in modern architecture. Innovative production methods allow completely new designs. Wood has indeed the potential to become the building material of the 21st century.



Building with wood has tradition and is a success recipe for the future.

WOOD – BUILDING MATERIAL WITH CHARACTER



AGAINST TRANSIENCE

Wood is a natural, living material. It constantly expands and contracts and requires special care. In order to keep its beauty, wood needs particularly outdoors protection from:

- Moisture
- UV-radiation
- Chemical and biological influences

DURABLE AND RESISTANT

Appearance and durability of a wooden facade largely depend on the selection of materials, processing and surface treatment. To meet today's structural standards with regard to durability and visual stability, protective measures in form of suitable coatings are available.

AESTHETIC

Besides their protective properties wood paints provide aesthetic aspects for a designer to underline the individual character of a wooden construction or the wooden interior design.



Due to the natural swelling and shrinkage of wood the demands on a coating are high.



CONVENTIONAL WOOD COATINGS



AMBITION AND REALITY

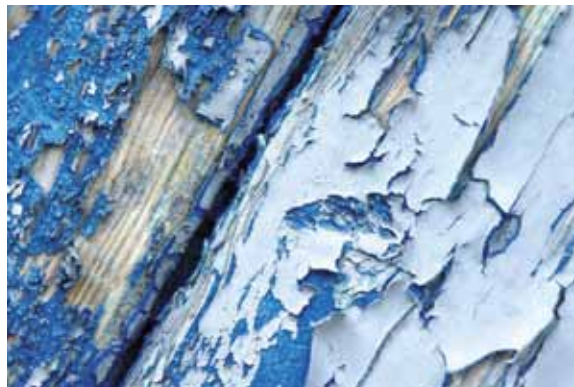
Conventional wood coatings are based on linseed oils, alkyd resins, acrylates and other plastics. They are supposed to reduce penetrating moisture and the disintegration of lignin by UV-light. However, binders of organic coatings show a restricted UV-resistance. This property first leads to discolourations or sheen changes and consequently in degradation of the binding agent.

DEFICITS

With a diminishing elasticity the coating becomes brittle, flakes off and loses its protective function. Moisture penetrates into the exposed areas of the wood structure, infiltrates the remaining paint coats, intensifies the "movements" of wood and thus accelerates the destruction process.

Disadvantages of those systems are:

- Inadequate UV-resistance: early disintegration of the binder, changes of colour shade
- Limited lifespan: cracks and spalling
- High maintenance costs: short renovation intervals, labour-intensive preparations



Conventional coatings for wood show a limited service life of approx. 3 to 7 years, depending on quality and stress situation.

INNOVATIVE WOOD COATINGS

VISION AND INNOVATION

Manufacturers of common wood coatings constantly introduce innovation approaches and put new products on the market. However, always using the same organic basis so that typical disadvantages like limited UV-resistance and high maintenance costs continue to be accepted.

THE SILICATE PAINT PRINCIPLE

Silicate paints consist of inorganic binding agents, mineral fillers and inorganic pigments. Curing takes place by means of a chemical reaction between the binding agent and mineral reaction partners in the substrate forming a chemical and insoluble bond. Silicate paints have been proven highly weather-resistant and durable on mineral building materials. They are particularly suitable for maintenance, preservation and the design of facades thanks to their typical lime-matt appearance and purely inorganic pigmented colour shades.

EUREKA!

After 20 years of research, the developers at KEIM succeeded in transferring the "silicate paint model" to the substrate of wood. Two proven coating materials are combined:

- An oil primer with good penetration property and,
- A silicate paint that protects reliably from weathering and exposure to UV-light.

The result is KEIM Lignosil - the world's first mineral composite coating to protect wooden surfaces from weathering.

The development of a silicate paint for the organic substrate of wood is a ground-braking progress in the quality of wood coatings!



KEIM LIGNOSIL® FOR SUSTAINABLE COATINGS



THE FIRST MINERAL PAINT FOR WOODEN SURFACES

The decisive advantages of the silicate system structure are enhanced by the very small material and work effort while renovating. In technical and economic aspects, KEIM Lignosil is unbeatable.

EASY RENOVATION

Thanks to the ageing behaviour of KEIM Lignosil which is a typical characteristic for silicate paints, a highly durable coating structure provides the advantage that the surface usually don't need to be sanded off prior to a refinish. A thoroughly performed cleaning of the surfaces is all the preparation work it takes. For this reason priming with KEIM Lignosil-Base/-W is unnecessary.

BENEFITS

A coating with KEIM Lignosil preserves and protects modern and historic building structures and convinces with clear plus points:

- Low diffusion resistance
- Excellent moisture protection
- Absolutely lightfast and UV-stable
- Extremely resistant to weathering and durable
- Matt appearance as requested by the monument protection
- Easy to renovate
- Tested according to DIN EN 927
- Security with proved single components

KEIM Lignosil is the successful transfer of the "silicate paint model" to the organic substrate of wood.





KEIM LIGNOSIL®-HRP FOR CRACKS AND JOINTS

FILL AND COMPLEMENT

KEIM Lignosil provides a vital and sustainable contribution to the durable function of the building. A perfect match for this is KEIM Lignosil-HRP, a two-component paste to fill cracks and deeper cut-out areas in not dimensionally stable and limited dimensionally stable wood components predominantly in the outdoor area.

RENOVATE

With KEIM Lignosil-HRP cracks and deeper cut-out areas in boards, bars and claddings, e.g. during the renovation of half-timbered houses, can be filled with little effort to create a surface with a uniform structure. KEIM Lignosil-HRP consists of a powder and a liquid component and is free from synthetic additives.

STRENGTHS

KEIM Lignosil-HRP convinces with clear benefits:

- Wood-like characteristics
- Good flank adhesion
- Mechanically workable
- Fast drying
- Two-component system
- Long open time
- Permeable

Not suitable for structural wood supplements.



INTERVIEW WITH A PROFESSIONAL: JÖRG HINKELMANN, MASTER PAINTER AND RESTORER



Mr. Hinkelmann, KEIM is better known for mineral substrates and not for wood.

Why do you trust in KEIM Lignosil-HRP?

I was personally involved in the development of KEIM Lignosil-HRP and can for a good reason say that there are products out there that promise the same characteristics but none of those work like KEIM Lignosil-HRP.

What is the specific feature of KEIM Lignosil-HRP?

KEIM Lignosil-HRP is open to diffusion, dries very fast, the adhesion is excellent and the handling very easy and, because the material is processible for a long time. But what's really ideal for me as restorer is the fact that I can prepare exactly the quantity I need.

“Cracking in historical wood constructions is inevitable. With KEIM Lignosil-HRP we have developed the solution for your restructuring.”



KEIM LIGNOSIL®-VERANO FOR CONTROLLED GREYING



A QUESTION OF AESTHETICS

The attitude of architects and builders hereto is controversial like the phenomenon itself: Accepting the fact to let nature take its course or controlling the development with a coating. Now there is an elegant way out of this dilemma: KEIM Lignosil-Verano, a silicate based finish, produces a naturally beautiful, silver-grey patinated wood appearance from the first application on. With a conscious decision to waive the protective function, a coating with KEIM Lignosil-Verano changes over time more and more into natural greying. Repainting is not necessary. The result will be the desired look of an elegant, greyed wood facade without further maintenance efforts.

NATURAL FINISH OR COATING?

Greyed wooden facades have a particular charm. But it may take decades until the wood shows an evenly grey patina like a mountain hut in the Alps. Untreated wooden facades change their colour and texture under environmental influences. It is difficult to predict such changes because many factors influence the different facade surfaces of the building exposed to the weather in various ways. Wood type, direction, location, rainfall, air purity and the constructional prerequisites decide on the optical development.

SUSTAINABILITY

KEIM Lignosil-Verano is very special. It is biocide- and solvent-free and guarantees a natural, mineral matt, colour-stable appearance. The treated surfaces remain open to diffusion. KEIM Lignosil-Verano is a particularly economical and sustainable system thanks to fast drying and very easy application.

COLOUR SHADES

KEIM Lignosil-Verano is available in classic and in metallic colour shades. Please refer to our KEIM Lignosil-Verano colour range.

Grey is not like grey ...



KEIM LIGNOSIL®-INCO FOR INTERIOR DESIGN



FROM SEMI-TRANSPARENT TO OPAQUE

KEIM Lignosil-Inco is an innovative silicate paint for opaque and semi-transparent paint coatings and is suitable for the interior design of wood and wood materials.

OPTIMAL ROOM CLIMATE

KEIM Lignosil-Inco contains the natural hygroscopic characteristics of wood and thus ensures a natural and pleasant indoor climate.



VARIETY OF COLOURS

Colour shades: White, colour card KEIM Exclusive and KEIM Avantgarde, further colour shades on demand. All colour shades can be mixed with each other. Monochrome shades 9001-9010, metallic shades 1001-1004.

ADVANTAGES

- Colour-stable, lightfast and UV-resistant
- Mineral matt
- Excellent adhesion
- Particularly economical to refinish
- Permeable
- Non-film forming
- Solvent- and plasticiser-free
- No harmful emissions (TÜV-tested)
- Ecological





KEIM LIGNOSIL® OVERVIEW OF SYSTEMS

EXTERIOR



KEIM LIGNOSIL-COLOR

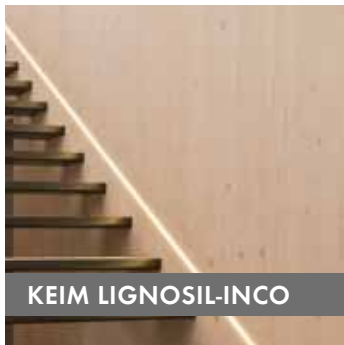
KEIM Lignosil-Color is a patented, opaque, silicate colour coating for wood outdoors. KEIM Lignosil-Color provides in combination with the primer KEIM Lignosil-Base/-W a durable weather protection coating and is tested according to DIN EN 927. The system is externally monitored by the institute Fraunhofer-WKI.



KEIM LIGNOSIL-VERANO

KEIM Lignosil-Verano is a silicate greying stain for dimensionally limited wood building elements outdoors. KEIM Lignosil-Verano simulates a weathered, greyed finish as it would happen to wood after years of weather exposure.

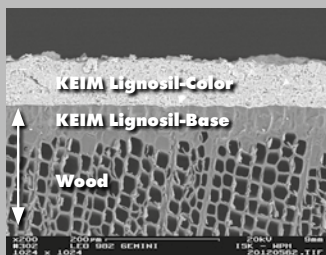
INTERIOR



KEIM LIGNOSIL-INCO

KEIM Lignosil-Inco is an innovative wood coating for transparent up to opaque interior colour designs. KEIM Lignosil-Inco is free from harmful substances and breathable. Plus, it preserves the natural hygroscopic properties of wood and thus provides a natural and pleasant indoor climate.

KEIM Lignosil®-system - patented protection with an inspiring variety of colours



Fraunhofer

Third-party inspection WKI

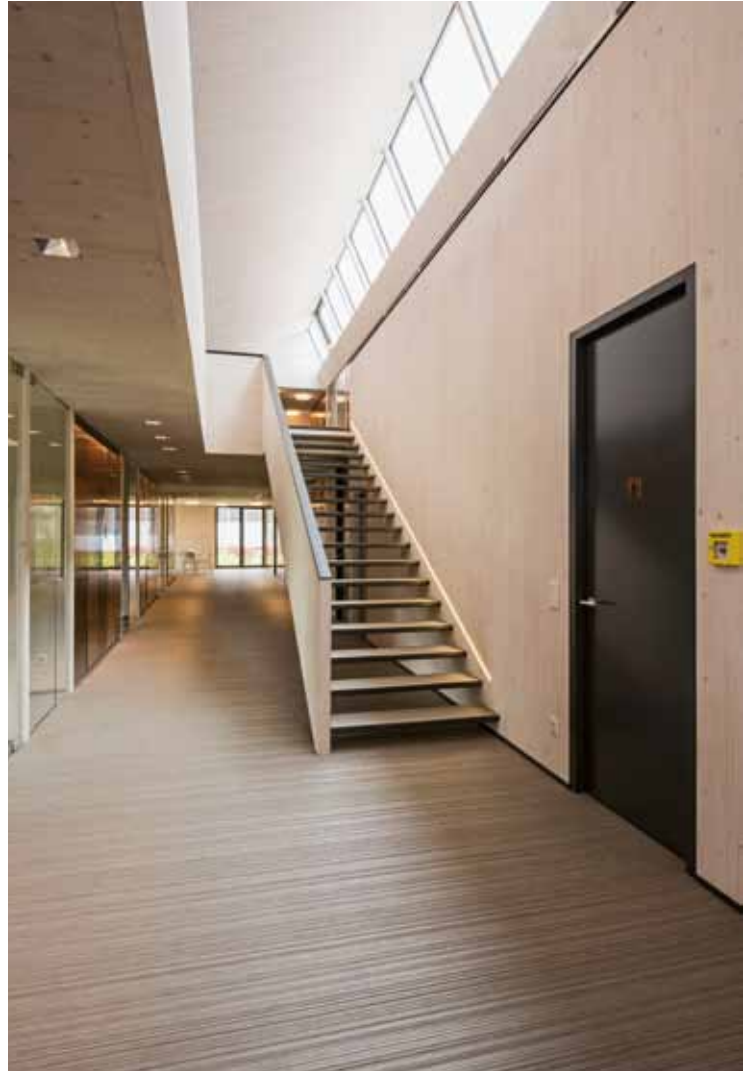
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You will find further information on our homepage.





Wood - fascinating building material for endless creative possibilities ...





KEIMFARBEN GMBH

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