WHITE-PAINTED FRONT PANEL, SURFACE-TREATED WITH TIKKURILA ULTRA PRO

Your house is expected to live on from generation to generation. That is why we use Tikkurila Ultra Pro - an industrial surface-treatment concept that will protect your house even before it is built, and far into the future.

Tikkurila Ultra Pro - finishing concept meets the demands of the construction industry, sawmill industry and other end users of wooden structures. The unique system is based on Ultra Pro 30, an acrylate-based water-borne surface-treatment that provides protection for wood surfaces. It is based on an industrial surface-treatment process in which two layers of finishing coats are applied directly on the wood without a separate primer. This is done so that we can guarantee the best quality and weather resistance for exterior panels available on the market.

Faster surface-treatment process than before
The idea behind Ultra Pro is to produce painted facade panels for manufacturers of prefabricated housing elements, construction companies and consumers. The best surface finish is achieved when two layers of Ultra Pro 30 are painted under controlled conditions in the factory so that external weather conditions and other stress factors cannot affect the final result.

Cost-savings during every stage of the process
The advantage of two-layer Ultra Pro-treatment is very quick stackability, which allows shorter lead times in industrial painting lines, and through that, significant cost-savings. Facade panels painted with the Ultra Pro-method will be cost-effective, especially in the long term, because the number of maintenance paintings will be reduced. For the construction process, this means fewer working days and simplification of the project stages, since there is no reason to worry about a primer coat, or a need for two coats of finishing paint at the work site.

15-year maintenance interval
For wood panels treated in accordance with the Ultra Pro-system, a maintenance interval of 15 years is achieved. The surface-treatment is performed in accordance with the combination in the table below:

Ultra Pro
2 x Ultra Pro 30 Industrial painting process
1 x Ultra house paint Finishing paint added at the construction site

Important information regarding Ultra Pro-treatment and maintenance painting:
Wood panelling that has been treated in accordance with Ultra Pro surface-treatment systems will age with dignity and maintain its beautiful appearance. For maintenance painting, Beckers Perfect is recommended for long life and optimal adhesion. Painting according to the Ultra Pro-system protects the wood from rain and other moisture, thereby minimizing the formation of cracks in the wood's surface. Less moisture also reduces bleeding through the wood surface, which in turn reduces discolouration on the paint surface. In addition, the growth of mould on the surface is hindered due to the good moisture-protection properties. The raw materials used in Ultra Pro-products are of the highest quality, which ensures the Ultra Pro-system's good colour stability and gloss retention in normal weather conditions.

Nothing lasts forever. Even wood panelling treated using the Ultra Pro-system, may be affected by factors that are not due to the surface-treatment:

- The painted surface can be damaged by a third party, which can lead to problems at a later stage.
- If the design is defective, it can cause damage to the layer of paint. Additionally, dampness, condensation and heat leaks damage painted surfaces.
- Wood has natural properties that cause damage to the painted surface, for example, resin bleeding.
- Today's climate is more humid than it was before, which leads to poor resistance to dirt and mould or mildew on surfaces. Wooden panelling, which has been treated in accordance with Ultra Pro-system, should be washed regularly with appropriate products from Alcro-Beckers.

Wood as a building material

Wood is a popular building material because of its workability, flexibility and natural appearance. Because it is renewable, it is also considered an environmentally friendly material. Wood is also a very competitive building material in terms of price.

Surface-treatment increases the wood's weather resistance, improves the building's appearance, and adapts to the surroundings. Surface-treatment also protects the wood from the effects of sunlight and moisture. Less wetting and drying of wood leads to fewer cracks. If the wood can be kept dry, it will be more resistant to fungi such as; mould, blue discolouration and rot.

Prerequisites for a successful surface-treatment

Nicely-sawn spruce is a good underlay for surface-treatment. The structure of a fine-sawn surface provides good conditions for a high level of adhesion of the paint. Moisture dynamics and the technical characteristics of spruce is also good, which in turn improves the durability of surface-treated wood. Wood used for facades must be of a high quality and of sufficient thickness to give the surface-treatment a long maintenance interval.

Surface-treatment should be performed as soon as possible so that the surface is not exposed to fungi and sunlight. Follow the manufacturer's instructions for the surface-treatment process. The instructions are based on careful exposure testing of the products. A treatment with a protective wood primer reduces the frequency of maintenance painting by protecting the wood and colour against fungi. When the primer has been added and dried, the surface is pre-treated as quickly as possible.

When high-quality products are used as primers and top finishes, the risk for problems is minimised and the intervals between maintenance painting will be longer. The total amount of primer and finishing coat must be at least 80 microns of dry colour paint in order for the paint layer to provide long-lasting protection. In this way, the surface is protected against moisture and crack formation and the risk for flaking is also reduced. It is particularly important to treat sawn surfaces, since water is quickly absorbed through the untreated end faces of the boards. Consequently, an expected maintenance interval can be up to 15 years and maintenance is not labour-intensive or expensive.

Environment and Quality

Environmentally friendly, high quality and increased demands on the surface-treatment level have been key factors in the design of the Tikkurila Ultra Pro-system. The service life of wood can be extended considerably by using the right surface-treatment products. For Ultra Pro-products, which include the Ultra Pro-system, we have used the latest technology in water-based paints, which are used for industrial painting. Durability and longevity are important characteristics of the products.

When using water-based Ultra-products, you get an odourless and safe working environment, both in industrial environments and when finishing-processing is done on the construction site. These products reduce environmental impact in comparison to similar solvent-based coatings and do not emit any harmful solvents at the workplace. In addition, paint residues and wood waste that are generated during surface-treatment can easily be recycled.

By selecting the Ultra Pro-coating process, a high level of quality and an environmentally-adapted end result is achieved. In turn, that will have a positive impact on the building's resale value and extend the maintenance interval.

Painting combinations

Further specifications for painting in accordance with the Ultra Pro-concept is based on the inclusion of the following treatment combinations in the painting description for timber:

Ultra Pro 30
– 15-year maintenance painting interval
Preparation: Remove all loose material such as dirt and dust from the surface to be treated.
Industrial painting: 2 x ULTRA PRO 30.
Finishing-painting at the construction site: 1 x Beckers Perfect house colour.

Important! The final layer can be applied on-site within one year after installation.

Water permeability
The diagram provides a comparison of water permeability between untreated wood and barge boards coated with either Ultra Pro 30 finishing coat or other primer or finishing coat available on the market. The results show that barge boards coated with Ultra Pro have the lowest water permeability. The binding agent used in Ultra Pro 30 provides optimal protection for the wood.

Surface, gloss and colour
The wood's surface structure does not limit the design in any way. An Ultra Pro-surface can be achieved on all types of wooden surfaces since Ultra Pro-coating has excellent adhesion properties. The starting point of the design can be either fine-sawn or planed panelling. The surface of industrially-coated wood is smooth and enhances the characteristic texture of the wood. Coatings that are applied at the building site enhance surface durability and provide a broomed effect in the wood.

The gloss is defined by the finishing coat. Tikkurila's colour shades and Kaunis talo colour chips can be used in the exterior colour selection.

Gloss may vary depending on the painting conditions.

Product	Gloss	Tinting system
Ultra Pro 30	Semi-matte	Avatint
Beckers Perfekt	Bright	Avatint

Construction sites and operation techniques
The Ultra Pro-method gives a new dimension to the handling and management on construction sites, and also enables work regardless of the weather. However, this assumes that consideration is given to specific methods in the design, production and organization at the construction site.

Techniques at the construction site
Treated wood panelling and wood should be handled at the construction site just like any other finished materials. Panels shall be transported, stored and installed in such a way that the surface is not damaged. A damaged coating can be repaired with an Ultra house paint. To cover the nail heads and damage to wooden panels at the construction site, a layer of Ultra house paint is recommended. If variations in the gloss are acceptable, it is possible to repair painting damage at the construction site.

The boards' end surfaces that have been cut at the construction site shall be coated with a layer of Bestå house paint. This can be done without the rest of the surfaces needing to be coated.

Establishing the technology
The basis for the Tikkurila Ultra Pro-concept's design is to be a modern construction technology with the opportunities that this provides. The full benefits can be gained from industrial-coated wood if all handling is designed in such a way that there is no need for finishing painting at the construction site. This is done by fixing wooden panels using a hidden nail technology. Otherwise, measures must be taken in such a way that the visible parts of the fasteners do not require surface-treatment. If the visible parts of the fasteners must be surface-treated, the final surface-treatment at the construction site must be made using an Ultra house paint.

Tikkurila Ultra Pro
– industrial finish without a separate primer
Proper surface-treatment can significantly extend the life of exterior wood panelling. The best weather resistance is achieved when Ultra Pro 30 is applied twice, directly on the wood, in the factory, under controlled and optimal production conditions, and with the right coating methods and timber grades.

Minimize costs on the painting line and construction site
The advantage with two-layer application using Ultra Pro is very quick stackability, which allows for short lead times in industrial painting lines.

The traditional painted surface, which is painted at the construction site becomes unnecessary if the outer wooden panel is secured with hidden fasteners. In addition, the finishing coat can withstand transport, storage and installation.

Advantages with two-layer Ultra Pro-treatment:
- Short lead times without a separate primer.
- Excellent adhesion to the wooden surface.
- Can be tinted in all shades of Tikkurila exterior paints.
- Maintenance interval of about 15 years.