



## Ecologically friendly

**TimberMin** – Offers permanent non-toxic protection.

The ultimate wood preservative and fire retardant, made from natural renewable raw materials.

### Areas of Application:

- Construction Timber
- Wooden decks
- Wooden facades
- Cellulose-based products
- Thatch roofing

TimberMin is a non-toxic, colourless, water-based, mineral substance which protects against all kinds of rotting and decomposition. Its novel principle of mineralization allows it to offer long-term protection against ageing wood (rotting); it also strengthens wood and offers preventive fire protection, can also be used to combat wood insects, including termites. With its safe ingredients and water basis, TimberMin is environmentally friendly, and is not subject to labelling classification.

The disposal of TimberMin falls under the general waste regulations and no additional requirements is necessary.

### Application Domains:

It is best used in the treatment of construction wood (roof beams, rafters and wooden stand constructions), or for wooden facades, to protect against weathering, insect infestation and fire, as well as wood strengthening. Softwoods become like hardwoods.

TimberMin can also be used for cellulose-based products (such as corrugated cardboard) as a means of protection against rodents, fire and moisture, as well as strengthening. In the domain of arts and crafts, there exists the option of protecting herbal components (such as leaves / autumn foliage etc.) against decomposition.

### Instructions for Use:

TimberMin can only be applied on raw and untreated (and, therefore water-absorbing) wood.

If there is an “old” coating already present, it may be necessary to ensure the thorough removal of this water-repellent barrier. The wood moisture content should also not exceed 18% at the time of the application. The wood can normally be pre-dried before an application, to ensure the introduction of as much protective material as possible. The processing temperature should not be below 5°C. The product must be protected against frost.

### Basic Protective Agent:

When using TimberMin as a primer (basic protective agent) as part of a new coating, a single thinned application (diluted with 20% water) followed by a subsequent undiluted application is normally enough. If protection against termites or increased fire protection / special wood strengthening is desired, the product should be applied 3 times “wet in wet”. Then further treatment can take place with varnishes or lacquers. It is also possible to achieve intensive colouring of the wood, with prior pickling or commercial standard surface coatings. Particularly good effects can be achieved with a product which is already dyed in environmentally friendly colour shades.

### **Final Treatment Without Further Protection:**

If the product is to be used as wood protection which means – without further surface treatment – a saturating application which fills the wood cells is recommended; this can normally be achieved under wet conditions, just like varnish applied three times.

It should be noted that the colourless product, when exposed to water (weathering), forms a silvery-grey surface because of the minerals that it contains, such as is associated with wood pre-greying by UV light – see greying.

### **Greying / Pre-greying:**

During saturation of the wood or the application of water-repellent layers, the crystalline ingredients of TimberMin form light-grey residues. This is a given if the wood is exposed to weathering (without additional protective coating).

In this respect, TimberMin is excellent for creating so-called “pre-greying surface structures” for facades which also have a homogeneously greyed appearance coupled with long-term wood protection. If this is desired the surface can be left like this.

### **Colour Design:**

If a light grey surface is not desired, the wood can be coloured with the addition of commercial-standard dispersion paints (tinting pastes). In such a case, it is recommended that the wood surface be cleaned with a high-pressure cleaner beforehand, to remove interfering mineral residues and other residues. This can also be achieved via washing and / or sanding. However, it is normally recommended that the product already be dyed beforehand, for the sake of ensuring better processing and adhesion of the colour.

### **Special Instructions:**

TimberMin is designed such that the active substances become water-soluble again after prolonged contact with water outside the wood cells. This guarantees that TimberMin can be repeatedly applied at any time right up to saturation. However, this is normally only necessary for making the wood surface more attractive again – the highly effective crystallizing effect of TimberMin does not subside. The saturation of the solution can result in surpluses of active substances in the product (light grey sediment), which is negligible as far as application use is concerned.

**NB:** Wood treated with TimberMin can stick together. So be sure to separate wood during the treatment!

### **Drying Time:**

Given the aqueous basis of TimberMin, the drying depends strongly on the ambient temperature and the respective air humidity. Under normal processing conditions (15- 20°C), a drying period (surface drying) of 3-6 hours can be expected. However, one should observe a period of 24 hours for additionally layered structures.

NB: The product dries after approx. 20-30 minutes.

Work devices – spraying devices in particular – should not be left unused for longer than max 30 minutes, to prevent nozzles etc. from sticking. Work devices can be easily cleaned under flowing water. Dried material can be disposed of in household waste.

### **Material Consumption:**

Material consumption essentially depends on the wood moisture and the wood type (softwood / hardwood).

1.0 L product quantity for up to 30 m<sup>2</sup> is acceptable per coating. With fast-growing softwood, one must always allow for a higher material consumption than with hardwood.

Optimal protection is provided with triple application.

### **Application with Paintbrush or Spray gun:**

During application with a paintbrush or spray gun, it must be ensured that sufficient active ingredients (material) are applied to guarantee a sufficient level of protection. This is normally achieved with a dual-layer application (for protection against termites) or a triple-layer application ("wet in wet" wherever possible). Optimal wood protection is guaranteed if the sapwood portion is substantially impregnated with active substance, which, on principle, can be best ensured by dipping impregnation or kettle pressure or even a "product bath".

### **Buoyant Impregnation / "Product Bath":**

With buoyant impregnation, the to-be-treated wood is in a tub or a foil trough filled with TimberMin. Wood floats and it can suck up the product (with the side facing the liquid). It is important that the wood is turned around in the "product bath" after some time, for the purpose of achieving complete wetting. The product bath is a very simple and effective application method for introducing as much active substance as possible into the wood and adequately filling any insect feeding holes or wood cracks.

### **Immersion Impregnation:**

During immersion impregnation, one should note that air pockets can be formed in the wood because of immersion in the immersion bath. It is therefore advisable to dip and remove the wood 3 times, to allow trapped air to escape and ensure an optimum soaking. As part of this, it is necessary to observe working times and draining times, for both of which 5 minutes is sufficient.

During immersion impregnation, it is also necessary to consider that the evaporation of water from the immersion trough can lead to a surface-hardening layer. This can be resolved via replacement of the missing share of water and stirring. The product can then be re-used. Remaining whitish portions are unresolved active substance compounds which have no negative effects but which, rather, could essentially remain as an active substance excess.

### **Kettle Pressure Impregnation:**

The product can also be processed with kettle pressure. The usual procedures (vacuum, pressure) must be observed.

### **Combative Measures:**

In the event of an insect infestation, the product must be applied at least 3 times "wet in wet" (manual application). In addition, drill hole impregnation must be performed, with the injection of TimberMin in the boreholes and the insect feed areas (blow it out beforehand if necessary). Only if there are no untreated wood sections available, can an insect infestation be fully stopped and further feeding areas averted.

### **Fungus combating:**

TimberMin can also be used against fungal infestations e.g., in masonry.

The product should be sprayed on the affected areas. Fungi are integrated by the crystallizing effect and thereby rendered harmless. Fungal spores are unable to spread further as well.

### **Protection against termites:**

Termites are a major problem in tropical and subtropical areas. As a rule, the soil around the building must be treated with strong poison, to prevent the wood-consuming insects from penetrating the building.

TimberMin is a completely poison-free and inexpensive option for protecting wood against infestations.

With this, it is necessary to ensure that all wooden parts (including interfaces) are sufficiently covered with the product to prevent the insects from gaining access to the inside of the wood.

**Arts and crafts:**

It's fixing, strengthening, and impregnating effects mean that TimberMin is also suitable for the stabilization and consolidation of e.g. plant elements such as autumn foliage or even whole plants used in decoration. Ideally, the parts should be dried beforehand.

**Cellulose building materials:**

Cellulose building materials are becoming more and more prevalent. With this, cellulose composite panels offer good heat insulation, with excellent ecological benefits compared with hard foam panels e.g., made of Styrofoam. The disadvantage of cellulose insulation materials is their high-water absorption rate, as well as their low resistance to rodent infestation (mice etc.) and fire.

With its comprehensive protective qualities, TimberMin also offers holistic protection on an ecologically sound basis.

**Ecological Aspects:**

With its special crystallization action, TimberMin does not require any poisonous elements or other active ingredients / substances which are detrimental to the environment, especially regarding its anti-insect effects. The aqueous basis also allows for an inexpensive and highly effective impregnation. The high pH value of TimberMin is an additional protection factor against insect infestation.

**Precautions:**

Keep TimberMin out of reach of children and uninformed persons.

Avoid contact with eyes, in case of contact with eyes, rinse out with clean water immediately.

If swallowed, seek medical assistance.

Store above 1°C.