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# Treatment of wooden Window Frames

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Information

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- **GENERAL**

Due to the different exterior and interior conditions to which the windows are subject, the wood is stressed from all sides. The exterior is stressed by frost, solar radiation and hard rain. The interior is stressed by vapour, condensed water and also by the mechanical strain of opening and closing the window.

Oily wood lazures and covering oil paints are very vapour open so that damages due to humidity are prevented. Especially the covering Stand Oil Paints combine good weather resistance with durability and stability of the colour. They do not flake, chip or tear, stay elastic and they weather superficially by and by, while the coating beneath stays intact. This makes renovations easy: just cleaning and overcoating.

Diffusion gradient:

A lot of humidity appears at the interior side of windows. (condensation water). Coatings on windows at the interior must be more diffusion-tight than those at the exterior (gradient of vapour pressure) to ensure a balance in the humidity of the wood. Even better is to adjust the interior coating to be slightly more diffusion-tight.

- **CONSTRUCTIVE WOOD PRESERVATION**

Constructive wood preservation is every measure that keeps the wood as dry as possible and prevents long-term humidity and is the most efficient wood protection.

Large roof overhangs, dripping edges and the ventilation of boardings should be considered already in the planning phase. There should be no areas where water can remain.

- **CONSIDERING THE HUE**

In addition to the desired hue for the window paint, also the amount and intervals of necessary renovations should be taken into account.

It is necessary to add pigments to coatings in the exterior for protection against UV-radiation. The pigments do protect the wood from turning grey on one hand, on the other hand they also protect the coating itself from weathering. As a rule: the more pigments added, the better is the UV-protection and the longer is the life of the coating. That is why covering Stand Oil Paints are the most durable coatings. In tinted Lazures, lighter pigments (hues like pine and spruce) have disadvantages in UV-protection compared to darker pigments and require a renovation coating more often. This is independent from the type of paint: synthetic resin lazure or natural paint.

Wood that needs to be dimensionally stable (e.g. window frames) should be coated with bright hues, because dark hues are heating up in the sunlight, which can lead to warpage of the wood.

We do not recommend lazuring white and light grey hues with Titanium White, because of poor UV-protection and durability-shortening photocatalytic effects.

- **WARRANTY**

Window manufacturers do only warrant for their windows, if they are coated with a recommended paint. The use of other than the recommended paints normally results in the release of the warranty.

- **PREPARATION OF THE SUBSURFACE**

The procedure described refers to **window frames made of untreated wood!!!** Most of the new windows available are treated in accordance with VOB (Vergabe- und Vertragsordnung für Bauleistungen – German Construction Contract Procedures) with water dilutable wood conservation coatings and intermediate coatings. These pre-treatments (often acrylic-bound) might possibly lead to not very durable coatings when overcoated with natural oil paints.

For attaining a professional and ecologically sound oil coating it is essential to use untreated wood, or to thoroughly remove old paints of undetermined composition using a chemical paint stripper or sand paper.

All surfaces should be smoothed evenly and the edges rounded by grinding with sand paper not finer than P 120.

- **PREVENTATIVE WOOD PROTECTION**

To prevent damage by insects and fungal decay in both exterior and interior areas such as kitchens and bathrooms where the air can be very humid, the impregnation with **Boron salt** (Art. 210) is recommended.

1kg of Boron salt is diluted in 10l of cold water and applied wet-in-wet until the wood is saturated. Thereafter, the wood must dry thoroughly and it might be necessary to resand.

- **CONDITIONS FOR USE**

The surface must be untreated, absorbent, clean, dry, free of fat and pH-neutral.

Temperatures for application and drying:

At least 10°C for at least 48 hours

Wood humidity:

The humidity measured at the exterior in a depth of at least 5mm must not exceed 15% for softwood and 12% for indigenous hardwood. Oil paints applied thin and evenly are dry after approx. 24 hours at 20°C. Lower temperatures and high humidity extend drying times.

- **PUTTY RABBETS / GLAZING**

Putty rabbets are primed with Base Oil (Art. 300) and then pre-coated with (tinted) Wood Lazure Exterior or opaque Stand Oil Paint -half rich-.

Single-glazed windows:

Cement window panes with Linseed Oil Putty (Art. 1104). Coat with Stand Oil Paint or (tinted) Wood Lazure after drying.



Double-glazed windows:

Let oil paint coatings in the rabbets dry for at least 5 days at 20°C. Insert window panes with neutral silicone. Silicone is not coatable with Wood Lazure or Stand Oil Paint, working carefully is a must.

White and transparent silicone can turn yellow on oil paints.

• **TREATMENT OF END-GRAIN WOOD**

End grain must be treated at least two times with Base Oil (Art. 600) until it does not absorb any more oil.

Observe the drying times between the working cycles.

• **COLOURLESS / LAZURING COATINGS**

Priming:

Priming with Base Oil is not necessary. Thus, the natural structure of the wood is emphasized by the pigments contained in the Wood Lazure.

Windows interior:

Intermediate- and final coating with Wood Lazure Exterior (Art. 320) untinted or tinted with KREIDEZEIT pigments up to 175g of pigments per 1 litre of Wood Lazure.

Add up to 20% (vol.) of Resin Oil (Art. 341) to reduce diffusibility if desired.

Windows exterior:

Intermediate- and final coating with Wood Lazure Exterior (Art. 320) tinted with KREIDEZEIT pigments up to 175g of pigments per 1 litre of Wood Lazure.

The Wood Lazure must not be used untinted in the exterior. Unsuitable KREIDEZEIT pigments for use in the exterior are: Ultramarine Blue and Violet, Cassel Earth, Sootblack and Litophone.

• **OPAQUE COLOURED COATINGS**

Priming:

The window frame is painted once with undiluted **Base Oil (Art 300)**. The thin fluid base oil ensures good penetration of the wood which, in turn, ensures that the wood pores are properly filled.

After approx. 20 minutes, all oil remaining at the surface is removed with a dry, lintfree cloth. **The base oil should not form a layer on the wood, it shall penetrate the wood and fill the pores.** On softwood, the priming is dry and safe to coat after approx. 24 hours, hardwood (esp. oak tree) requires a drying time of at least 48 hours.

Windows interior:

Intermediate coating with Stand Oil Paint -half rich- (Art. D 1100 - 1112). Final coating with Stand Oil Paint -rich- (Art. D 1600 - 1612).

To reduce diffusibility, a second intermediate coating with Stand Oil Paint -half rich- is possible.

Windows exterior:

Intermediate coating with Stand Oil Paint -half rich- (Art. D 1100 - 1112). Final coating with Stand Oil Paint -rich- (Art. D 1600 - 1612).

• **WINDOW RABBETS**

The layers of paint must be applied very thinly in window rabbets. Thick layers of paint can make the parts of the window stick together.

Tip: Wait at least 48 hours after the last application of paint before closing the windows. Rub a thin layer of **Talcum** into the rabbets to prevent the freshly coated parts from sticking together. KREIDEZEIT provides Talcum for free as a service.

• **CARE AND MAINTENANCE**

Maintaining an oil coating makes sense esp. in the exterior. Regarding windows, maintenance is a lot easier than renovation.

Cleaning: clean coatings at least once a year with water and a soft sponge, add some Marseille Soap (Art. 220) if necessary.

Care: Apply Wood Lazure Exterior (Art. 320) thinly with a soft cloth to refresh the shine of the dry surfaces, esp. at the weather sides. Then polish with a dry cloth. Shine and intensity of the colours will return. Still shiny areas do not need maintenance.

• **RENOVATIONS**

Renovations are necessary when the Stand Oil Paint in the exterior is very matt and starts chalking, resp. the pigments of the Wood Lazure are washed away by rain. Clean the surfaces with soapy water (Marseille Soap, Art. 220), still shiny areas are slightly sanded (Sandpaper P 120 - 150). Renovation coatings are carried out with Wood Lazure Exterior (Art. 320), tinted with KREIDEZEIT pigments up to 175g of pigments per 1 litre of Wood Lazure or with Stand Oil Paint -rich- (Art. D 1600 - 1612).

• **LIST OF PRODUCTS**

Art. 210 - 214	Boron Salt
Art. 300 - 304	Base Oil
Art. 320 - 324	Wood Lazure Exterior
Art. D 1100 - 1112	Stand Oil Paint -half rich-
Art. D 1600 - 1612	Stand Oil Paint -rich-
Art. 801 - 870	Pigments
Art. 997	Talcum 150g
Art. 1104 - 1105	Linseed Oil Putty
Art. 220 - 222	Marseille Soap

Please refer to the valid price list for product prices.

Detailed product information is available for the above mentioned products.

The above information has been compiled in accordance with the best of our experience and knowledge. Owing to the application methods and environmental influences, as well as the various surface properties, no liabilities or legalities pertaining to the individual recommendations can be entertained. Prior to application, the suitability of the product is to be tested (trial coat).

The validity of the text ceases with revisions or product modifications. You will find the latest product information at >> [www.kreidezeit.de](http://www.kreidezeit.de) << or directly at Kreidezeit.

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