ADLER | Maintenance Manual



TIME FLIES, BUT NOT FOR YOUR WOODEN WINDOWS AND DOORS

Windows and doors made of wood provide cosy and comfortable room climate in all seasons and act as a shield against noise and environmental pollution. They have natural thermal insulation properties and are more sophisticated than other constructions in this respect. From the ecological perspective, wood is clearly the most eco-friendly material for window frames and doors.

WOODEN WINDOWS AND DOORS

- are more resistant and provide perfect protection.
- offer diverse range of design options.
- provide healthy room climate.
- save both energy and cost.
- ensure a favourable ecological balance.

The influences of weather such as the sun, wind, humidity and temperature fluctuations as well as any bluing and fungal attack are constant sources of stress for wood. In order to protect your windows and doors against the impact of these weather-based influences, proper surface treatment is of vital importance for long service life. For this purpose, ADLER has developed the most modern window and door coating systems, as well as products for maintenance and preservation that ensure long periods of durability and ease of maintenance.

With the help of this manual, we would like to provide all necessary information that you need to maintain and preserve your windows and doors. This ensures that you are happy with your wooden windows and doors — in line with the ADLER slogan, "Time flies, but not for your wooden windows and doors."



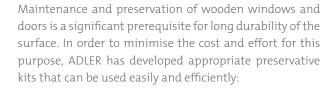
GOOD TO KNOW DURING THE INSTALLATION PHASE



- Any work on windows or front doors must be covered by the downstream construction-related work (DIN 18350).
- Protect the surfaces particularly against coming into contact with plaster, mortar and floor screed.
 We recommend the use of plaster rails as the best technical solution
- Use only Tesa film 4438 or 4838, 3M Scotch brand tape and brand 2090 or KIP 308 special for adhesion.
- The adhesive tape should be pulled out carefully within 2 weeks. Do not use any sharp objects for this purpose.
- Building moisture must be ventilated, and it is only in this manner that you effectively avoid damage to the coating and wood. For winter constructions we recommend heating and ventilating simultaneously (Inrush ventilation). Ventilate several times daily particularly for working with plaster and screed.



CLEANING AND MAINTENANCE



WINDOW PRESERVATION KIT

The ADLER Pflegeset Plus is a preservation system for wooden windows with transparent glaze finish used outdoors based on active cleaning substances and select resins. The durability of water-thinnable glaze finishes is enhanced by applying one coat annually. Micro-fine cracks and pores of the glaze film are sealed. The ADLER Pflegeset Plus is also the best choice for preserving and maintaining garden furniture. The treatment provides a silky lustrous surface finish and can be re-coated without a problem. The ADLER Pflegeset Plus is not suitable for attending to any existing damage to the paint or varnish.

In case of opaque window coatings, perfect UV protection is already provided and hence, application of the ADLER Pflegeset Plus is not recommended. ADLER Top-Finish on wood with opaque coating may lead to ugly streaks if you do not work professionally and accurately. It is adequate to clean regularly with hot water by adding a few squirts of ADLER Top-Cleaner or mild cleaning agent to it. In case of stubborn impurities or deep-seated dirt, you may then apply ADLER Top-Cleaner.



PROCESSING

Step 1 - Cleaning with ADLER Top-Cleaner:

Pre-clean the substrate with hot water by adding a few squirts of ADLER Top-Cleaner or mild cleaning agent to it.

Next, apply ADLER Top-Cleaner with a cleaning cloth and wipe it. Coarse dirt particles can be removed easily in this manner

Step 2 - Cleaning with ADLER Top-Finish:

Using ADLER Top-Finish is recommended only for surfaces with transparent glaze finish. Shake ADLER Top-Finish before use and apply a thin coat of it uniformly, using the cleaning cloth or the ADLER Fenster-Tool (window tool) on the pre-treated and dry surfaces.

The applicator pad ("Fenster-Tool") facilitates the application. Coating of the silicone joint is prevented with the help of an adjustable spacer to the glass.

When applying with the Fenster-Tool (window tool), generally large quantities are applied, which is why it is necessary to wipe the excess off using the cleaning cloth. Excessive quantity applied may lead to sagging of ADLER Top-Finish and also to grey streaks in the transparent glaze finish after several years of application.

We recommend, that you perform cleaning and maintenance using ADLER Pflegeset Plus once a year.

Drying time

It is tack-free after approx. 1 hour (ADLER Top-Finish)

Yield

The contents of one can are adequate for 10 m² (equivalent to about 10 standard windows inside and outside)

Contents of the ADLER Pflegeset Plus (Preservative kit)

- ADLER Top-Cleaner 500 ml
- ADLER Top-Finish 500 ml
- 1 cleaning cloth
- 2-piece tool set ("Fenster-Tool", i.e. window tool)
- Item number: 51695

The contents of the preservative kit can, of course, also be ordered out separately.

It is not necessary to apply the ADLER Pflegeset Plus for wood-aluminium windows. Instead, we recommend regular cleaning with hot water by adding a few squirts of ADLER Top-Cleaner or mild cleaning agent to it.



FRONT DOOR PRESERVATIVE KIT

The ADLER front door preservative kit is a system preservative kit for cleaning and repainting front doors with transparent wood finish or opaque surface. It forms a thin protective film providing protection against dirt and water with a beautiful silky gloss finish. Well-preserved surfaces must be well sanded before undertaking any painting work on them

DROCESSING

Step 1 - Cleaning with ADLER Top-Cleaner:

For deep cleaning, apply ADLER Top-Cleaner flat on the doors either with the cleaning cloth or spray it using the spray head supplied in the kit. Rewash with hot and clean water to remove adherent dirt and impurities.

Step 2 - Preservation with ADLER Top-Finish:

Shake well before use, unscrew the spray head supplied and spray ADLER Door-Finish flat. After about 10 minutes of drying time, the surface can be polished using the cleaning cloth. Repeat the procedure for a special and unique finish.

We recommend that you perform cleaning and maintenance using ADLER Haustürenpflegeset twice a year.

Drying time

Approx. 15 minutes (Door-Finish)

Yield

The contents of the can are adequate for approx. 20 m² (with two applications, the front door can be maintained 5 times)

Contents of the ADLER Haustürenpflegeset (Front door preservative kit)

- ADLER Top-Cleaner 500 ml
- ADLER Door-Finish 500 ml
- 2 spraying heads
- 2 cleaning and polishing cloths
- Item number: 51709

The contents of the preservative kit can, of course, also be ordered out separately.



CHECKING THE FILM OF VARNISH

In order to avoid greater damage subsequently to your high-class product, we recommend that you assess the coating of the wooden windows and front doors visually.

Check whether the film of varnish on your wooden windows or the front door has signs of mechanical damage, e.g. that have been caused by hailstorms. If there are signs of flaking on the coating or greying present, since, regular maintenance with the ADLER Pflegeset Plus or the ADLER Haustürenpflegeset was not done, it is necessary to touch up the damaged spots or apply a refurbishment coat.

Please contact an ADLER sales partner, carpenter or window manufacturer near you for detailed information regarding the refurbishment of windows and front doors. For more information on refurbishment or renovation, please visit our homepage www.adler-lacke.com.



PROPER VENTILATION



HEALTHY LIVING CALLS FOR VENTILATION! WITH PROPEI VENTILATION...

- you achieve healthy and cosy room climate.
- you reduce your heating costs.
- you prevent the formation of moulds in your living rooms.
- you enhance the service life and durability of your wooden windows and doors.

WHY PROPER VENTUATION IS IMPORTANT!

Earlier, continuous ventilation in the living rooms was not necessary. Ventilation took place "incidentally" by windows, joints and cracks that were not airtight. However, these non-sealed spots meant high level of energy and heat losses at the same time and resulted in higher costs of heating.

In contrast, new modern constructions and refurbishments are characterised by good thermal insulation, air-tight windows and building design without thermal bridges. Thus, heat remains in the room. The insulation effect of modern wooden windows is also far better than that of windows earlier. Often, condensed water forms on the insulated glass of the window, which is provided with the best U-value. Drops may run below them and cause fungal attack in the living rooms and bedrooms.

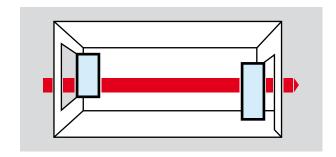
When new and converted structures dry up, large quantities of water vapour escape from the plaster and flooring screed inside. However, even the formation of atmospheric humidity by the residents is a natural process. This becomes particularly visible with vapour in the bathroom or while cooking. But even the residents on their own cause vapour constantly. Thus, one human being generates about one litre of water vapour per night! If the air inside the rooms is too moist then condensed water may develop. This enhances the risk of mould formation.

Improper ventilation or its absence pollutes the room climate and thus, the quality of life in your living room. Humidity, dust or harmful substances may accumulate in the living rooms and thus affect the feeling of well-being and health within your own four walls. Very low rates of air exchange lead to increased levels of CO, content and thus, to signs of fatigue and lower capability to concentrate.

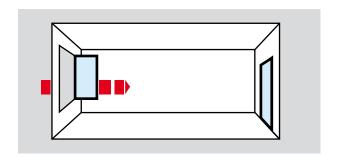
The primary prerequisite for good quality of air, and thus, quality of life is adequate and regular exchange of air. Moreover, proper ventilation helps you in saving energy and conserving the environment. This is because fresh and dry air gets heated much faster than that containing excessive moisture.

TYPES OF VENTILATION

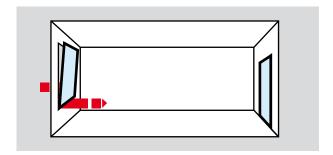
<u>Cross ventilation:</u> Ventilation methods in winter. 1 – 5 min., 3 - 4 times daily, by opening doors and windows opposite to one another as far as possible.



<u>Inrush ventilation</u>: Ventilation methods in winter when cross-ventilation is not possible. 5 – 10 minutes, 3 – 4 times daily, by opening one window or one door of the room completely.



• <u>Tilting the windows:</u> Ventilation method for summer. In winter, this method results in very low rate of air exchange and causes high levels of energy loss with the windows tilted permanently. Moreover, the walls in the upper lintel area cool down. Condensed water gets formed leading to moulds subsequently.



Automated ventilation systems are suitable for greater operating comfort. Sensors measure the atmospheric humidity and CO_2 concentration. Electromechanical ventilation elements open and close the windows as needed. These window ventilators can either be ordered out on window manufacturers for new windows or installed subsequently as a retrofit solution. The energy loss is as low as possible thanks to thermal regeneration. Depending on the financial implication, these systems can also be linked to the building facility management system or the heating control system so that heating does not take place at the same time as the ventilation phase so that the energy loss is as low as possible.

TIPS ON PROPER HEATING & VENTILATION

- For hygienic conditions of the air, ventilation should take place briefly every 2-3 hours.
- If the room layout is feasible, cross ventilation should take place via 2 openings in the room.
- The duration of the ventilation depends on the season of the year. Basically: the lower the outdoor temperature, the less can the ventilation period be! Cold outdoor air contains only low level of moisture and can absorb large quantities of moisture when it is heated up.
- The relative humidity of air in the room should not exceed 60%
- The rooms should be heated up adequately (to approx. 20°C). Even in rooms that are put to less use, the temperature should not be allowed to drop below 18° C under any circumstances.
- Keep interior doors between rooms heated to different temperatures closed.
- Ventilate the bathroom immediately after bathing or having a shower.
 - Keep the door closed while bathing or taking a shower.
- Keep the kitchen door closed while cooking (use a vapour extraction hood).
- Ventilate rooms that are used to dry laundry more often. Do not dry any laundry in living rooms.
- Avoid using humidifiers, room fountains or aquariums as far as possible.

ADLER PRODUCTS

You can get all the ADLER maintenance and preservation products mentioned from your carpenter, window manufacturer or at the ADLER sales partner near you: For detailed information on the subject of window maintenance and care as well as useful tips and tricks on your wooden windows and doors please visit our homepage www.protectedbyadler.com.

ADLER provides compatible and appropriate systems even for the refurbishment of windows and doors. In this way, you can give your windows and doors a new glossy look without much cost and effort. Simply enquire with the ADLER sales partner, carpenter or window manufacturer near you.

We hope that you enjoy your windows and doors provided with ADLER coatings.



ADLER – WOOD PAINTS & VARNISHES OF THE BEST MANUFACTURING QUALITY

The ADLER-Werk Lackfabrik (Paints and varnishes factory) is Austria's leading manufacturer of paints, varnishes and wood preservatives. The family-based enterprise with its head office located at Schwaz in Tyrol was established in 1934 and deploys a workforce of over 490 employees. Two thirds of the products manufactured are water-based. Thanks to the high level of commitment and innovative research work, ADLER is the market leader in the field of window coatings in Austria enjoying a market share of more than 60 %.



ADLER is also a popular and renowned partner for manufacturers of wooden windows and doors in several countries of Europe. Leading European research and test establishments (WKI, CATAS, Institute for window technology, Rosenheim) routinely audit and certify the high level of quality and the ecological responsibility of ADLER.





The seal of quality assures you that your wooden windows or doors have been coated with an eco-friendly premium product. The result: A naturally protected surface with a natural finish. With proper care, you will enjoy having it for several years.

www.adler-coatings.co.uk

ADLER-Werk Lackfabrik · A-6130 Schwaz/Tirol · Bergwerkstr. 22 T. +43/5242/6922-0 · Notfallauskunft DW 111 · www.adler-lacke.com

ADLER Deutschland GmbH - Kunstmühlstr. 14 - D-83026 Rosenheim · T. 08031/3045174 · ADLER Lack AG - Etzelstraße 5 CH-8856 Tüggen · T. 055/465 2121 ADLER Polska 5p. z o.o. · ul. Tymiecka 229 · PL-30-376 Kraków · T. 012/2524001 ADLER Slovensko s.r.o. · Pražská 675/10 · CZ - 642 00 Brno - Bosonohy · T. 731 725 957 · ADLER Italia S.r.l. · Via per Marco 12/D · 1-38068 Rovereto · T. 0464/425308