

# MAINTENANCE AND CARE GUIDE

## Immediately after installing the new windows:

- Do not clean glass panes straight away.  
An “eraser effect” results if silicon seal is not given 3-4 weeks to harden.
- Do not damage silicon seal with rough cleaning implements, micro-fibrous cloths or aggressive agents.

## Ventilation:

Ventilate properly using the new windows – it is not only healthy, it also saves on heating.

If a build-up of condensation is noticed on the window panes – or if the walls become damp and show signs of mould – this is down to perfectly natural causes: The windows are watertight. To prevent this happening in the first place, note the following:

- ventilate all rooms for about 20 minutes in the morning
- during the day, ventilate 3-4 times for about 10-15 minutes each time depending on use
- when ventilating, turn down the heating and open the windows wide.

If short, sharp exchange of air is not possible for whatever reason, contact a specialist for an energy-saving permanent ventilation solution.

## Benefiting from ventilation:

The whole point of ventilation is to introduce new air into the room from outside and to dispel “used” air. This is all the more important because new window designs close very tightly and do not allow exchange of air through cracks and gaps. The exchange of air must be sufficient enough to:

- cover the necessary oxygen requirement of people inside;
- dispel moisture, odours and toxic substances that continually form or result from the use of the building, as well as building moisture potentially present in new buildings.

Condensation water is the deposit of water ever-present in the air. Warm air absorbs more water than cold air. When warm air meets a cold surface, water in the air condensates there. This affects badly insulated components in particular. A development that occurred in residential housing accentuated the problem of moisture in houses in many ways. Previously it was the single glazing that was the coldest structural component, with condensation forming on window panes. With the installation of insulated glazed windows, it is no longer the windows that are the coldest component in older and badly insulated buildings – it is the wall areas neighbouring the window frame. This is where condensation builds up – and where mould grows as a result. More watertight gaps result in a lower rate of exchange of air and to further increase in air moisture indoors.

Not to be overlooked are those volumes of water that are given off as a result of every-day usage of the buildings by inhabitants:

### ***Daily release of moisture (in litres)***

<b>People</b>	<b>1.0 – 1.5l</b>
<b>Cooking</b>	<b>0.5 – 1.0l</b>
<b>Shower/bath (per person)</b>	<b>0.5 – 1.0l</b>
<b>Tumble-drying (spin-drying)</b>	<b>1.0 – 1.5l</b>
<b>Pot plants</b>	<b>0.5 – 1.0l</b>

A 4-person household can release up to 10 litres of water into the air during the day.

Large quantities of steam should be dispelled as quickly as possible and splashes in the bathroom wiped up. A short, sharp exchange of air can remove a quantity of up to ½ litre of water – depending on temperature and moisture content of the outside air. A relative humidity value of between 45 and 55 % is hygienic.

**Recommendations for heating and ventilation in "normal" housing**

- Particular attention should be paid to the replacement of room air.
- Keep the ventilation time short (short, sharp ventilation: Keep windows wide open; recommended time: 5 – 10 minutes)
- Ventilate several (3 – 4) times a day
- Do not obstruct the radiation of heat from radiators with furniture or curtains.
- Permanent ventilation, such as by tilting windows, should be avoided whilst heating (not just because of the energy savings).
- Doors of rooms in which a lot of steam is released are to be kept closed so that moisture does not spread to the whole of the living area. Remove steam quickly by ventilating.
- Keep doors of cooler rooms shut to prevent moist air from condensing on cold walls.
- Bedrooms should be temperature controlled (approx. 16–18°C) during the day for the air to be able to absorb moisture.

**Ventilating**

Ventilating to dispel moisture means exchanging warm and moist room air for cooler and drier outside air. Such an exchange of air should take place quickly, especially in winter, so that as little heat energy as possible is lost. The objective is simply to achieve a reduction in moisture. Fixtures, fittings and surfaces that enclose rooms should not cool down as a result of the long-term effects of outside air.

Effect of natural ventilation	Ventilation method window position	Approx. duration of ventilation to achieve air exchange
	Window and opposing door or window wide open "cross ventilation"	1 – 5 minutes preferred ventilation method
	Window wide open "short, sharp ventilation"	5 – 10 minutes preferred ventilation method
	Window half open	10 – 15 minutes
	Window tilted and opposite door wide open	15 – 30 minutes Ventilation method to be avoided
	Window tilted	30 – 60 minutes Ventilation method to be avoided

**Maintenance of fittings:**

Windows and French doors are usually fitted with high-quality tilt-and-turn fittings. In order to ensure proper and smooth operation, the following servicing work should be carried out at least once a year:

- Check the main components of the fittings for wear and correct seating. Tighten any loose screws and replace defective parts.
- Grease or oil all moving parts and all fastenings on the fittings (instructions are provided near the fitting on each window)
- Use commercially available grease (e.g. creep oil) without silicon.
- Do not apply coat to fittings when treating surfaces.
- The window fittings should be adjusted by a specialist to enable smooth operation.

## **Caring of surfaces:**

The principle of maintenance instead of coating generally applies. This means that wooden windows can be maintained and cared for in the same way as other precious things in life. This can delay, or avoid, costly painting.

A special care lotion (available from the window manufacturer) should be applied 2–4 times a year, e.g. at the same time you clean the windows. One such care program seals micro-fine cracks and pores in the glaze film, resulting in a satin-finish surface effect.

### ***WISCH + PFLEG***

Care lotion for coated wooden surfaces exposed to the elements.

- Application area: When rubbed in, the care lotion Wisch + Pfleg is particularly well suited for the preservation of wooden surfaces exposed to the elements, such as windows and outside doors, as well as for the care of finished surfaces. Suitable for all coated wood types, for transparent and covering surfaces.
- Procedure: Surfaces are cleaned with a mild cleaning agent. A soft, non-fibrous cloth is then used to rub the care lotion into the surface. Afterwards gently rub down using a damp cloth. Repeat this procedure 2-4 times a year.
- Benefits: Wisch + Pfleg penetrates into the surface, better protecting it from the elements. Water forms beads on the surface. Dirtying of the surface is reduced. Tested to DIN EN 71. Suitable for children's toys.
- Storage: 1 year, cool but free of frost
- Treatment temperature: 20°C (recommended)

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The following rules of thumb apply:

- During the 3<sup>rd</sup> year after installation at the latest, the outer surface should be cleaned, gently rubbed down and given a single application of the surface material used for the final finish.
- Windows and house doors with light, weakly pigmented colouring need to be inspected yearly and treated as above if required. This also applies to elements exposed to extreme weather conditions.
- Follow the general guidance and recommendations from the Association of Painters (Malerverband) in Frankfurt. The following table lists these recommendations:

<b>Exposure to</b>	<b>Colouring</b>	<b>Rework in the ...</b>
Outdoor climate but covered or open (not woods exposed to weathering)	transparent covering	3rd year 5th year
Outdoor climate (normal, direct weathering)	transparent light transparent dark covering	2nd year 3rd year 5th year
Outdoor climate (extreme, direct weathering)	transparent light transparent dark covering	1st year 2nd year 4th year