

CLEANING OF GLASS



**THIS
LEAFLET
WAS**

PREPARED BY:

Glass can bear a lot - but not everything!

Leaflet to prevent and minimise soiling during the service life and to clean various glass surfaces professionally and promptly.

Working Group 'Sicherheitsglas' im
Bundesverband Flachglas e. V.
Mülheimer Straße 1 • D-53840
Troisdorf

With the cooperation of:
Glaserhandwerk, Hadamar •
Gütegemeinschaft Mehrscheiben-
Isolierglas e. V., Troisdorf • Verband
Fenster und Fassade, Frankfurt





Cleaning Types

Glass as part of the facade is subject to natural and building-related soiling. Normal soiling, professionally cleaned at appropriate intervals, does not pose a problem for glass. However, depending on time, location, climate and construction situation, there may be a significant chemical and physical build-up of soiling on the glass surface, for which professional cleaning is particularly important.

This leaflet is intended to provide information on the prevention and minimisation of soiling during the service life and on the professional and timely cleaning of various glass surfaces.

During The Construction Progress

In principle, any aggressive soiling must be avoided during the construction progress. If this nevertheless occurs, the pollutants must be washed off by the polluter immediately after they occur, without leaving any residue, using non-aggressive products.

Especially concrete or cement slurries, plasters and mortars are highly alkaline and lead to corrosion and thus damage to the glass (blinding) if they are not rinsed off immediately with plenty of water. Dusty and granular layers must be removed professionally, but never dry. The client is responsible for regulating the interaction of the various trades on the basis of his duties to cooperate and protect, and in particular to inform subsequent work groups of the necessary protective measures.

Minimising contamination can be achieved by optimising the construction process and by separately commissioned protective measures, such as applying protective films in front of the windows or facade surfaces. The so-called initial cleaning has the task of cleaning the building components after completion of the building. It cannot serve to remove all dirt accumulated during the entire period of construction progress.

During Use

In order to maintain the properties of the glass over the entire period of use, professional cleaning at suitable intervals, adapted to the respective glazing, is required



"The use of pointed, sharp metallic objects, e.g. blades or knives, can cause surface damage (scratches)".

Glass cleaning instructions

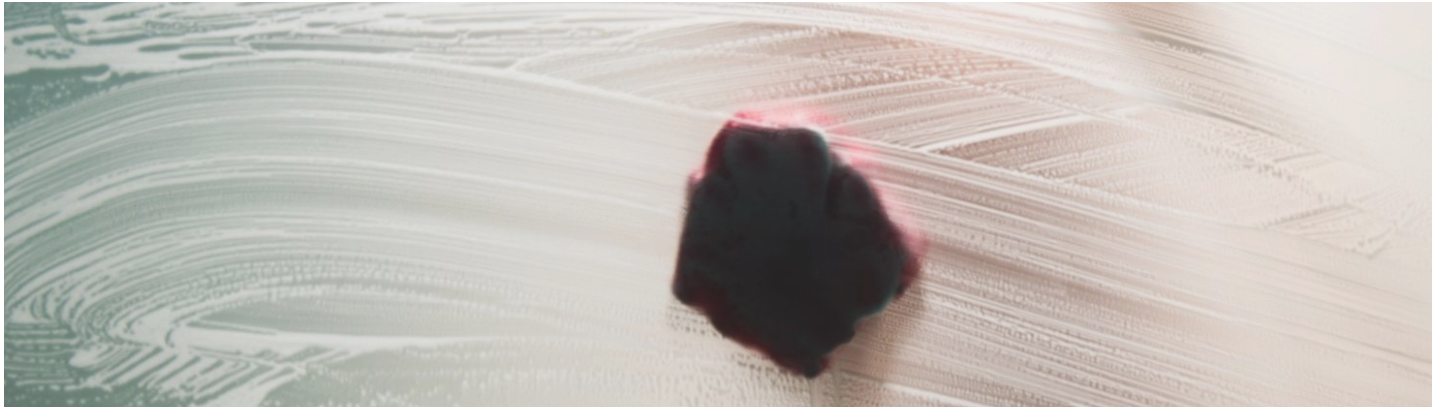
General

The following cleaning instructions apply to all glass products used in construction. When cleaning glass, always use plenty of clean water to avoid a scouring effect caused by dirt particles. Suitable hand tools include soft, clean sponges, leather, rags or rubber scrapers. Careful treatment of the glass cleaning tools is another prerequisite to avoid glass damage. Separate cleaning tools should be used for glass, seals and frames. The cleaning effect can be supported by the use of largely pH-neutral cleaning agents or commercially available household glass cleaners. If the dirt is grease or sealant residue, commercially available solvents such as methylated spirits or isopropanol can be used for cleaning. Of all chemical cleaning agents, alkaline lyes, acids and agents containing fluoride must generally not be used.

The use of pointed, sharp metallic objects, e.g. blades or knives, can cause surface damage (scratches). A cleaning agent must not visibly attack the surface. So-called "scouring" with a glass plane to clean entire glass surfaces is not permitted. If damage to the glass products or glass surfaces caused by cleaning is noticed during the cleaning work, the cleaning work must be interrupted immediately and the necessary information obtained to prevent further damage.

Specially finished and externally coated glasses

The following specially finished and externally coated glasses are high-quality products. They require special care and attention when cleaning. Damage may be more visible or interfere with the function. If necessary, special cleaning recommendations of the individual manufacturers must be observed, especially for externally coated products. Cleaning the glass surface with a "glass plane" is not permitted.



Some solar control glasses are designed as external coatings (position 1 = weather side). These are often recognisable by their very high reflection, even in the visible range. Solar control glass is often also thermally toughened at the same time, especially in façade panels or sunshades.

Furthermore, reflection-reducing layers (anti-reflective layers) can be applied to the outside or inside of glazing, which are naturally difficult to recognise.

Exterior or interior thermal insulation layers are a special case. In the case of special window constructions (box-type or laminated windows), these layers may exceptionally not face the space between the panes of the insulating glass.

Mechanical damage to these layers usually manifests itself as streaks of abrasion due to the slightly rougher surface.

Dirt-repellent/self-cleaning surfaces are hardly visible. Due to use, these layers are usually located on the side of the glazing facing the weather.

Mechanical damage (scratches) to self-cleaning layers not only represents visually recognisable damage to the glass, but can also lead to a loss of function in the damaged area. Silicone or grease deposits on these surfaces must also be avoided.

Therefore, rubber wipers in particular must be free of silicone, grease and foreign matter.

Toughened safety glass (ESG) as well as heat-strengthened glass (TVG) is permanently marked according to legal regulations and can be combined with the previously mentioned coatings. The surface of toughened safety glass is changed by the thermal toughening process compared to normal float glass.

Under certain circumstances, the surface tension introduced leads to damage becoming more visible than in non-tempered glass (sometimes also with a time delay).



Further References

The use of portable polishing machines to remove surface damage can lead to significant removal of the glass mass. Optical distortions, recognisable as a "lens effect", can be caused by this and lead to a reduction in strength. The use of polishing machines is not permitted, especially for the above-mentioned refined and externally coated glasses.

By the way:

Glass surfaces can be unevenly wetted, which is due, for example, to marks from stickers, rollers, fingers, sealant residues, but also environmental influences. This phenomenon only appears when the pane is moist, i.e. also when cleaning the panes.
