

PRETREATMENT OF FLOAT GLASS.
SPECIAL CLEANING FOR SPECIFIC
REQUIREMENTS.



BERLINER GLAS
Technical Glass
BERLINER GLAS GROUP

PRETREATMENT OF FLOAT GLASS.

Today, flat glass is primarily produced using the float process. Glass created in this way has two slightly different sides, depending on the process, the upper air side and the lower tin or metal bath side. These different sides can have a significant affect on the behavior of float glass during further processing.

During the production process, the glass melt flows onto a bath of molten tin. This leads to the diffusion of tin ions into the glass structure on the bath side. This chemically alters the glass layer, which can vary from the air side in terms of properties during subsequent processing. For example, if thin glass is chemically tempered, this alters the exchange of ions, which, in turn, causes the glass panel to warp.

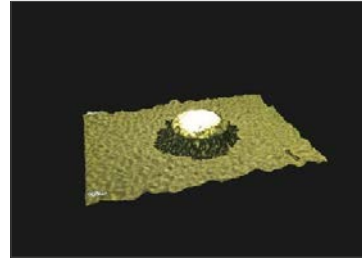
On the air side, however, this can lead to the condensation of tin oxide on the tin bath superstructure, and, as a consequence, a rain of small tin drops. On the one hand, these, as highly reflective dots, can be distracting, and on the other, they can lead to considerably larger defects in subsequent processes such as coating or structuring.

For certain applications, optimal conditions are necessary for additional processing, those we create during pretreatment.

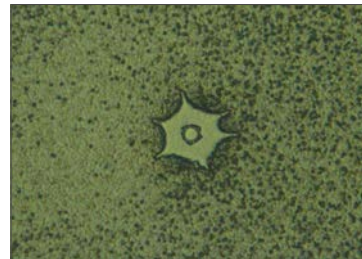
Surface treatments are long-lasting and do not structure the glass surface. The BG-Nonflex and BG-NFT structuring etchings may be required later.

OUR STRENGTHS – YOUR BENEFIT

- ▶ Unique expertise thanks to decades of experience in wet-chemical pretreatment of float glass
- ▶ Small and large production volumes possible
- ▶ Individual consultation
- ▶ Project-based development
- ▶ Fast and reliable order processing



Defect from structuring etchings due to tin drops



Coating defect due to tin drops

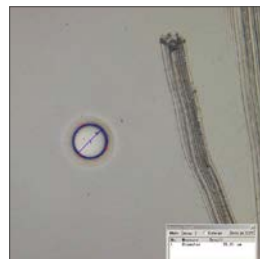
Removal of tin residue on the air side (no abrasion)

Match the air and bath side by removing approx. 20 µm per side from the glass surface

Application range	Precleaning the glass surface before coating or structuring	Thin glass that is to be subsequently chemically tempered
Benefits	Reduction of coating/structuring defects via the selective removal of tin particles on the air side	Float glass panels are almost chemically identical, which means that the ions exchange in a similar manner during chemical pretreatment, thus reducing sheet warping



Before etching: Tin residue
Ø 180 µm on the air side



After etching: Residual defects
after tin removal Ø 55 µm