

GROGLASS INTERFERENCE OPTICAL THIN-FILM COATED ANTI-REFLECTIVE GLASS TECHNICAL ADVICE

Reference number: PROC.A.13-3/1

- 1. Groglass anti-reflective coated glass reduces glare and reflection almost 100% which allows the user to show pictures, to merchandise or even a view in a way that was never achievable before. The coating is made with metal oxides that are sputtered onto float glass or other substrates. Groglass anti-reflective glass can be processed just as regular float glass, it can be tempered, laminated (PVB or resin), insulated, bent, drilled, etc. Even though it is a hard coating, care should be taken while handling the glass in the processing of the product (refer to Groglass Handling Guidelines).
- 2. The Groglass anti-reflective coating is applied so that glare is virtually invisible when viewed at a 90 degree angle. Under special light conditions and angles of view, one can see small differences in the reflection and small iridescent light effects. These effects are inherent to the manufacturing process of Groglass anti-reflective glass and are not subject for a claim.

3. Instructions for planning

Groglass anti-reflective glass should be protected from rain runoff and the weathering of steel and other building materials. Either the building owner should regularly maintain the glass by cleaning stains or the glass should not be used in that environment.

4. Danger

People have to be protected against "walking through Groglass anti-reflective glass". Groglass anti-reflective glass is "invisible" and if the glass is used in an application where people could accidentally walk into the glass then the glass must be marked a way that people are protected from injuring themselves.

5. Installation instruction

Before and after installing the glass one has to preserve the coating against mechanical damage (scratching). When transporting, putting it in stock and every kind of handling, one has to take care about **clean** supports, layers, tools, suctions etc. Keep the Groglass anti-reflective glass in a dry and UV protected environment (closed area).

6. If Groglass anti-reflective glass is used in an insulating unit, one must remove excess sealant material immediately. Avoid using too much solvent to remove the excess sealant. During the installation of Groglass anti-reflective glass avoid job site materials from getting on the glass or remove any spilled material immediately, this includes concrete, lime, stucco, etc. When removing materials that are abrasive (su ch as concrete) use plenty of water and try not to rub the material as it will scratch the glass. Always use cleaning cloths that are clean and not abrasive.

7. Cleaning

Groglass anti-reflective glass should be cleaned on a regular basis. Never let dirt or stains remain on the glass. Normally it's enough to just use water and sponge or cloth to clean the glass. If it's needed, one can use light detergent.

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8. It's better not to put any kind of stickers on the Groglass anti-reflective glass, because one can damage the coating when removing the sticker.

9. Products NOT to use with Groglass anti-reflective glass

- 9.1. Do not use strong alkalis, acids, detergents with fluoride, or solvents as they will destroy the coating.
- 9.2. Do not use detergents with mechanical devices (sand etc.) nor other mechanical millinery.
- 9.3. Do not use blades; steel blades may hurt the surface and cause scratches.
- 9.4. Not following the Groglass Handling Guidelines and cleaning instructions (Groglass Cleaning Advice) relieves the manufacturer of any warranty for the product.

10. Warranty

- 10.1. For Groglass anti-reflective glass, Groglass SIA will guarantee that under normal use and conditions the transmission and coating will not change.
- 10.2. Groglass SIA will replace Groglass anti-reflective glass within 5 years from date of purchase if defects occur in the coating. The sole responsibility of Groglass SIA is to replace the defective material only. It does not cover any costs associated with removal or replacement of the product. The warranty does not cover damage caused by misuse, neglect or accident. The warranty is non-transferable. Customer should note that according to Groglass Warranty Assurance Procedure, the glass shall be installed in final application no later than 12 months after delivery to Customer.