Information for Contracting Parties Who Order Laminated Glass for Glass Floors and Glass Stairs

Dear Sirs

The Pilkington IGP Sp. z o.o. company makes multilayer glass laminated with PVB to order; the product may be applied as an element of floors or stairs used for walking.

Since the safety of use and durability of the elements require special care, we present you with information which should always be taken into account in the design, installation and use of these products:

1. Taking into account the amount, thickness, and types of glass layers used for the production of a glass panel, these choices should be based both on the predicted size and type of operational load and the selected method of glass panel support, as well as the maximum load allowed for a given type of glass and the type of load.
2. In floors, it is generally recommended to use linear support along the circumference of a glass panel. The panel cannot be in direct contact with a metal supporting profile and it should be separated from the profile by a hard rubber divider.
3. A typical solution is to use laminated glass composed of three glass layers joined together using PVB. The upper panel is usually made of pre-stressed glass, with an increased resistance to mechanical damage and breakage. The middle and lower glass layers perform the supporting function, which ensures the required durability even if the upper panel breaks.
4. The installation method of a glass floor panel should ensure that only the upper surface of the panel is exposed to mechanical damage during use and that the risk of impact on the glass edges is eliminated. The upper surface of the panel should not protrude above the surrounding elements.
5. The installation method of glass panels should ensure proper drainage along the circumference of the panels so that:
    - there is no rain or washing water on the panels, which could carry a significant increased risk of pedestrians slipping;
    - the side edges of the panels do not remain in direct contact with water penetrating into the area around which the panel is installed.

PILKINGTON IGP Sp. z o.o. with its registered office in Sandomierz
27-600 Sandomierz, Portowa 24, tel. 48 15 8323041-49, 48 15 8326100; fax 48 15 832 62 89
REGON No. 006911139, NIP No. 123-00-06-857, District Court in Kielce, 10th Economic Division of the National Court Register
Court Register, KRS (National Court Register No.): 0000012897, Share capital: 506,500 PLN
Management: President – Krzysztof Granicki
www.pilkington.pl

6. The size of the hole intended for the installation of a glass panel should be at least 10 mm larger than the size of the panel, and increased by the possible production tolerances for the panel.
7. In glass floor panels, it should be taken into account that deep scratches may appear much earlier, lowering the aesthetic quality of the glass elements. This may be caused by fine sharp grains of sand and similar materials carried by footwear; as the footwear applies pressure to the grains, mechanical scratches on the glass are produced. The risk of such scratches occurring depends on where the panel is placed, the volume of movement on the glass elements, the type of footwear, and the application of solutions to eliminate the carrying of fine grains by footwear.
8. Walking on a flat, smooth surface (such as glass, for example) always carries the risk of slipping and falling. Apart from numerous architectural solutions to reduce the risk of falling when walking on such surfaces, there are also certain solutions to apply in order to reduce the risk of slipping on glass floors or steps. An example of such solution is to put fine white points using print screen technology during the process of prestressing the upper glass layer of the panel. The fine points produced on the surface of the glass panel are durable and have a coarse surface which has better adhesion for footwear. The transparency of a glass panel processed with this technique is not much lower than the transparency of completely smooth panels. This solution reduces the risk of slipping; however, it cannot completely guarantee preventing accidents from occurring. A decision about the application of this solution has to be made before starting the order. Another possible solution is to stick a special coarse anti-slip tape. As the tapes wear out, they require replacing.

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Krzysztof Skarbiński

Quality Manager
Pilkington IGP Sp. z o.o.
tel. 12 627 79 00; 601 50 60 51
e-mail: Krzysztof.Skarbinski@pl.nsg.com

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