PILKINGTON

Technical Information

ATS-170
2008/07/01

Handling, Inspecting, Fabricating and Installing

Pilkington Optifloat™ Opal Float Glass

1. Product Description

Pilkington **Optifloat™ Opal** Float Glass is a high quality translucent float glass that offers high transmission together with excellent privacy. The product has a beautiful frosted appearance produced by the acid etching process. Only one surface is etched but it can be supplied with both surfaces etched, by special arrangement.

Pilkington **Optifloat Opal** glass is a comparatively high-value product used in unique glass applications requiring excellent obscuration with diffused light. Therefore, it is important that handling and processing is carried out in accordance with good glass and glazing practices.

2. Product Range

The standard sizes for Pilkington **Optifloat Opal** Float Glass are given below:

Nominal Thickness		**Thickness Tolerance**		**Size**	
in	mm	in	mm	In	mm
1/4	6	0.23 – 0.24	6 +/- 0.2	141 ¾ x 84	3600 x 2130
3/8	10	0.38 – 0.41	10 +/- 0.3	141 ¾ x 84	3600 x 2130
1/2	12	0.47 – 0.53	11.9 – 13.5	130 x 84	3302 x 2130

Pilkington **Optifloat Opal** glass is available in DST (3.2 mm) thickness on special demand.

Pilkington **Optifloat Opal** glass is packed in standard end-caps.

3. Storing

Glass should always be stored inside, in clean, dry, well-ventilated areas and away from conditions which may lead to the formation of condensation. It should be stacked upright and fully supported in a manner which prevents the glass from sagging. It should be stood on edge strips of wood, felt or other relatively soft materials. Products like Pilkington **Optifloat Opal** glass are particularly sensitive to water marking so the avoidance of condensation is important.

Like other Pilkington glass products, the surfaces of Pilkington **Optifloat Opal** glass are protected with an interleaving material that resists moisture staining and abrasion between the individual lights.

4. Handling

Although general care should be taken when unloading, no particular precautions are necessary. It should be noted however that products like Pilkington **Optifloat Opal** glass are more sensitive to marking than ordinary float glass, so extra care should be taken.

The **Optifloat Opal** surface is microscopically textured and must not be marked or identified with adhesive labels or wax crayons. Metal objects, tape measures, etc., must not contact the **Optifloat Opal** processed surface. Suction cups can be used on the processed surface but they must be in excellent condition. Sucker cup marking can be prevented by using filter paper hair nets over the cups. Note, these covers will reduce the friction contact with the glass and increase the possibility of the glass sliding, when vertical, if there is insufficient vacuum on the cups.

Redistribution

When packing Pilkington **Optifloat Opal** glass for redistribution with the processed surface exposed, a fine even distribution of interleaving medium, or alternatively, a standard paper interleaving should be used.

The use of square cork separating tabs is not recommended as they can leave difficult-to-remove deposits on the **Optifloat Opal** surface.

When securing the glass for redistribution, ensure that packing straps or other means of retention, do not come into direct contact with the processed surface.

We recommend that the product is not carried exposed on the exterior frames of delivery vehicles, nor should the **Optifloat Opal** surface contact the rubber cushioning material on typical transport frames.

5. Cutting

Cutting tables and transfer tables must be covered with felt and cleaned regularly so as to avoid scratching caused by small flakes of glass.

The glass should be cut with the **Optifloat Opal** surface facing up. Care must be taken to avoid rough contact with the surface from metal objects or marking may result.

Cutting wheel pressures and break-out settings on automatic cutting machines will be very similar for uncoated glass. If lubricant is used this should be of a water soluble type and of minimal quantity.

As the glass should be processed with the **Optifloat Opal** surface upwards, special attention should be paid to any parts of the process which involve contact with the upper surface (e.g. the method of tracking the score) to ensure that they do not mark the glass.

We recommend that operators wear clean gloves to reduce the possibility of surface contaminants.

Gloves should be checked to ensure that they do not leave prints on the processed surface. It is essential that contamination of the processed surface by non-soluble cutting oil, which may be present on gloves, be avoided.

To avoid causing scratches while stacking or storing the cut product it is advisable to use clean, non-marking, spacer material.

It is important to note that the glass should be washed immediately after cutting, and prior to further glass fabrication such as tempering or laminating.

6. Washing

The following recommendations for washing of **Optifloat Opal** apply to machine washing, hand cleaning, and spot cleaning.

Under no circumstances should abrasive cleaners or strong alkalis be used on the processed surface.

Machine Washing
Standard multi-stage automatic washing machines, using hot water and detergents are suitable for the washing of Pilkington **Optifloat Opal** glass provided that the machines are

cleaned and maintained in accordance with the manufacturers recommendations. The use of De-mineralised water is strongly recommended, especially for the final rinse section. Cleaning can be further improved by pre spraying the glass with a glass cleaning solution. The glass should be passed through the washing machine so that the processed surface is not against the rollers.

Hand Washing / Spot Cleaning

When hand cleaning, we recommend the use of standard glass cleaners (excepting those containing solids in suspension), together with a lint-free towel of either paper or cloth.

Abrasive cleaners should not be used as they may leave marks, which may only be seen under certain lighting conditions.

For organic deposits, which may have been abraded onto the processed surface, use an appropriate solvent prior to normal cleaning. The **Optifloat Opal** surface will not be damaged by organic solvents such as alcohol or acetone. "Goof Off" by Valspar Corp. Wheeling, IL, may be effective in removing stubborn organic based marks.

Do not use a razor blade, wire wool or any other metal item to remove stubborn marks, as scratching will result.

After Pilkington **Optifloat Opal** glass has been cleaned it may be considered a reasonable precaution for personnel to wear clean cotton gloves during further handling.

7. Edge Work, Bevelling and Hole Drilling

Edge work is ideally performed on horizontal machines with the **Optifloat Opal** surface facing up and where there is little or no machine part contact with the top surface.

Care must be taken to avoid marking the **Optifloat Opal** surface with the clamping pads in the presence of abrasive slurries from grinding and bevelling. These abrasives include Cerium Oxide and other polishing compounds as well as the slurry formed by fine glass residue from the abrasive cutting and polishing wheels. Fine abrasions are caused by: pressure, abrasives, and relative movement between glass and the clamping pads. All three components are present in edge work operations where vibration can be sufficient to provide the relative movement.

If surface marking occurs, and if none of the three variables can be sufficiently altered to rectify the situation, then it will be necessary to use a strippable film or masking tape to protect the **Optifloat Opal** surface. Any such film or tape must be removed immediately after processing to avoid leaving a hard-to-remove adhesive residue.

Edge working with diamond wheel machines is preferable as this can avoid the potential Cerium Oxide cleaning and marking difficulties encountered with abrasive edging operations.

8. **Laminating**

Pilkington **Optifloat Opal** glass is suitable for lamination by either PVB autoclave or cast-in-place processes. In either case the glass must be laminated with the processed surface facing outward, away from the interlayer.

9. Tempering

Pilkington **Optifloat Opal** glass should always be tempered with its coated surface facing up and with its short edge leading into the furnace. The glass must be visibly clean at this stage. It is imperative that that all marks, traces of cutting oil and other contaminants be removed prior to toughening. Failure to do so may result in such marks being "burned" into the glass.

Tempering furnaces of different manufacture and different furnace models from the same manufacturer will have differing heating / quenching regimes. Therefore, as with any 'new' product, it is recommended that processors confer with their furnace manufacturers to establish the appropriate guidelines for tempering Pilkington **Optifloat Opal** glass. In general, a cycle similar to that for clear float glass of the same thickness will produce satisfactory results.

10. Insulating Glass Units

There is no requirement for edge-stripping of the **Optifloat Opal** surface. However, it is important to confirm that the glass is effectively cleaned and that full sealant adhesion is developed to the processed surface. The responsibility for this rests solely with the unit manufacturer.

Do not allow aluminium spacers to be dragged across the processed surface when assembling the units, otherwise permanent marking may result.

The processed surface should face the air space of a double glazed unit (the **Optifloat Opal** surface should be #2 or #3, counting from the outside) thereby eliminating any possibility of in-service marking. The positioning of the processed surface should be consistent in each unit - especially when units are to be glazed side by side-to avoid differences in appearance.

11. Glazing

Clean any lubricating oil from roll-in neoprene or vinyl gaskets before use to prevent oil contamination on the glass surface. Lubricating oils containing Silicone will be particularly difficult to remove from the **Optifloat Opal** surface. See Item 6 above for spot cleaning recommendations.

The use of a very small amount of water-soluble dishwashing detergent, such as "Palmolive™" is recommended if lubrication is necessary for roll-in gaskets.

Do not allow glazing tools to contact or mark the **Optifloat Opal** surface.

12. Visual Control

It is the responsibility of the fabricator to carefully inspect Pilkington Optifloat Opal both before and after fabrication. Glass not rejected by the fabricator during inspection prior to fabrication will be considered acceptable by Pilkington.

13. Correct Glazing of Pilkington Optifloat Opal glass

It is the responsibility of the user to ensure that its use is appropriate for any application and that such application complies with all relevant local and national legislation, standards, codes of practice and other requirements.

14. Mock-up Construction

The construction of a full-scale mock-up is recommended, where the glass can be examined, under typical and realistic lighting conditions, from both sides, in transmission and reflection. A full-size mock-up, including both vision and spandrel glass, should be constructed and viewed on site, representing the proposed building location and viewing geometry. It should be approved prior to final glass production. This will show the final installed appearance of the glass far better than viewing small hand held samples under interior lighting conditions.

Please call Architectural Technical Services directly at (419) 247-4448 for further information.