



Pilkington **Reflite™**

Handling and Processing Guidelines



**PILKINGTON**  
NSG Group Flat Glass Business

# Pilkington Reflite™

## 1. Product Description

Pilkington **Reflite™** is a hard, on-line coated, solar control glass, available in a range of colours. It has excellent scratch resistance and durability and in most circumstances can be treated in the same manner as uncoated glass. However, it should be remembered that Pilkington **Reflite™** is a comparatively high-value product and it is important that handling and processing is carried out strictly in accordance with good practice, as described throughout these guidelines.

Pilkington **Reflite™** may be used in single glazing applications (with the coating on surface #2, counting from the outside) as well as in Insulating Glass Units. It can also be laminated, heat strengthened, toughened and curved (or bent).

Due to its versatility, Pilkington **Reflite™** may be used in a wide range of residential and commercial applications.

## 2. Delivery and storage

The glass sheets should be transported vertically and never in direct contact with each other. As with other Pilkington glass products, the glass surfaces of Pilkington **Reflite™** are protected with an interleaving material that resists moisture staining and abrasions between the individual panes. The use of other materials may damage the coated surface. The packaging and its contents should be protected from moisture. Any rubber materials (e.g. load frame clamps) in contact with the coated surface should be protected by a smooth plastic film to prevent permanent marking the coated surface. Also the use of dirty or contaminated rubber materials (e.g. cutting fluid or grease) is not allowed.

Pilkington **Reflite™** is generally delivered on stillages in pack quantities in a manner consistent with that of float glass of similar thickness and size. Unless otherwise requested,

Pilkington **Reflite™** is presented with its coated surface outwards.

Removal of polythene wrapping is recommended as soon as possible after taking delivery of the pack. The desiccant present inside the polythene

wrapping is only intended to last for the duration of journey to the customer. If the polythene is not removed it may result in condensation of moisture on the glass. It is recommended that the polythene wrapping is replaced with a sheet of polythene, draped over the top of the pack, to prevent entry of dirt between the plates during customer storage.

Glass should be stored in dry conditions, stacked upright (typically between 3 and 6 degrees) and fully supported in a manner which prevents the glass from deflecting or toppling. It should be stood on edge strips of wood, felt or other relatively soft materials. A dry and well-ventilated environment should be used for storage and the glass should be protected from sudden changes in temperature and humidity and against alkaline materials. Pilkington **Reflite™** is a coated product and should be treated as such. Care should be taken whilst offloading and during storage to avoid marking the surface.

When securing to pallets or transit frames, ensure that the strapping or other means of retention does not come into direct contact with the coated surface.

## 3. Handling

The coated surface of Pilkington **Reflite™** is hard and not easily damaged. However, it should not be marked with adhesive labels or wax crayons, nor should suction cups or metal objects be dragged across the surface. Suction cups may be used on the coated surface but they must be in good, clean condition.

It is recommended that a risk assessment is undertaken to identify the hazards to people during handling. The correct personal protection equipment should always be used when handling glass including eye protection, safety footwear, cut-resistant aprons, cuffs and gloves.

To help identify the coated surface during handling, a pen or similar object may be used to touch one of the surfaces. The coated surface produces a single reflection of the pen tip whilst the uncoated surface produces a double reflection of the pen tip.

#### 4. Edge stripping

Edge stripping is not required for Pilkington **Reflite™**.

#### 5. Cutting

The same process used for cutting float glass can be adopted for Pilkington **Reflite™**.

The glass should be cut with the coated surface facing up. Care must be taken if straight edges, metal tape measures, cutting bars or cutting sticks are placed on this top surface, as metal marking may occur (see Washing).

Operators should wear gloves and aprons to protect the coated surface from contact with belt buckles or metal studs and care should be taken with watch straps or other jewellery. Contact with metal can result in metal deposits on the coating that can be difficult to remove.

Cutting wheel pressures and break-out settings on automatic cutting machines will be very similar to those for uncoated glass. If a lubricant is required it should be a water soluble type. When cutting on the coated surface, either automatically or by hand, wheel life may be somewhat shorter. When cutting both coated and uncoated glass of the same thickness no change in the wheel type is required, however, scoring may feel slightly different when cutting on the coated surface by hand. The glass should be processed with the coated surface facing up and special attention should be paid to any part of the process which involves contact with the upper surface (e.g. the method of tracking the score) to ensure that they do not mark the glass.

Gloves should be clean and any rubber-type gloves should be checked to ensure that they do not leave prints on the coated surface.

#### 6. Arrissing

Cross-belt arrissing is recommended for Pilkington **Reflite™** prior to toughening. Vertical machine arrissing can be undertaken, however, care should be taken to ensure the pads are free of any abrasive particles that may cause scratches. In addition, the pad distance should be adjusted for the glass thickness to ensure that the abrasion is minimised.

#### 7. Washing

Pilkington **Reflite™** has a hard, durable coating applied to one surface during manufacture. As with any coated glass product, care should be taken while washing to prevent damage to the coating. The following recommendations for washing Pilkington **Reflite™** apply to machine washing and manual washing.

Under no circumstances should abrasive cleaners, hydrofluoric acid, fluorine compounds or strong alkalis be used on the coated surface.

##### *Machine Washing:*

All labels should be removed before washing the glass. Standard multi-stage automatic washing machines are also suitable for washing Pilkington **Reflite™** provided they are cleaned and maintained in accordance with the manufacturer's recommendations. Hot demineralised water should be used, however, additives such as detergents should not be added. Cleaning can be further improved by pre-spraying the glass with a glass cleaning fluid. The glass must be passed through the washing machine so that the coated surface is not against the rollers. The drying air should be filtered in such a way to allow for complete drying of the product and prevention of the formation of droplets.

It is recommended to test a specimen prior to fully washing the parts. Under no circumstances should the glass be allowed to remain stationary inside the washing or drying machine.

##### *Manual washing:*

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

Abrasive cleaners should not be used as they can cause bright or dark spots which may only be seen under certain lighting conditions. Using a standard glass cleaner will remove marks made by plastics and acrylics. For organic deposits which may have been abraded onto the coated surface, an appropriate solvent should be used ensuring any Health and Safety requirements are followed. It is recommended to check the effect of the solvent on a small area of the coating prior to use.

Do not use a razor blade, wire wool or any other metal item to remove stubborn marks as they will leave metal particles on the coating that appear as scratches. Where this occurs inadvertently, these marks may be removed using a weak solution of acids, however, this should be regarded as an extraordinary remedial action and advice from Pilkington should be sought.

After Pilkington **Reflite™** has been cleaned, it may be considered a reasonable precaution for operatives to wear gloves during further handling. Gloves should be clean and before use of a new type of glove, especially rubber-base gloves, checks should be undertaken to ensure that they do not mark the coated surface.

#### **8. Lamination**

The coated surface of Pilkington **Reflite™** will not normally be damaged by either the PVB or cast in place laminating processes. However, care should be taken to avoid excess interlayer material adhering to the coated surface, as this may be difficult to remove completely (see Washing). It should be ensured that separators used in the autoclave do not leave a residue or mark the surface of the glass.

Pilkington **Reflite™** is usually laminated with the coated surface outermost (i.e. with the coating not in contact with the interlayer). In such cases, the contact between the exposed coated surface and the manufacturing equipment should be carefully controlled. It is possible for lamination to take place with the coated surface in direct contact with the interlayer. In this instance, it is the responsibility of the laminator to ensure adequate adhesion between the interlayer and the coated surface.

#### **9. Toughening**

Pilkington **Reflite™** should always be toughened with its coated surface uppermost. Toughening furnaces of different manufacture and different furnace models from the same manufacturer will have differing heating/quenching regimes. Therefore, it is recommended that processors consult their furnace manufacturers to establish those conditions for toughening which are most suited to their particular plant and to maintaining the properties of Pilkington **Reflite™**.

It is possible for the toughening process to produce some optical distortion, which may be noticeable in the reflection of images. It is therefore recommended that all glass for a single project be toughened in the same direction.

#### **10. Bending**

Pilkington **Reflite™** can be curved (or bent). It is recommended that the radius should not be less than 760 mm and that test samples are taken prior to commencing a production run and a case-by-case investigation is made for each radius.

#### **11. Insulating Glass Units**

Pilkington **Reflite™** can be used in Insulating Glass Units. To maximise its solar control performance, it should be used as the outer pane of an Insulating Glass Unit, with the coating on surface #2 (counting from the outside).

There is no requirement for edge-stripping. However, it is important to confirm that the glass is effectively cleaned and that full sealant adhesion is developed to the coated surface. This is the responsibility of the Insulating Glass Unit manufacturer.

Aluminium or steel spacers should not be dragged across the coated surface when assembling Insulating Glass Units as may leave a metal deposit on the coating.

#### **12. Appearance**

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

#### **13. Durability**

Pilkington **Reflite™** is classified as a Class B coated glass in accordance with EN 1096-1:1999 'Glass in building - Coated glass'.

#### **14. Glazing**

Pilkington **Reflite™** should be glazed in accordance with relevant national standards, guidelines and codes of practice.

This publication provides only a general description of the product. Further, more detailed information may be obtained from your local Pilkington Building Products supplier. It is the responsibility of the user to ensure that the use of this product is appropriate for any particular application and that such use complies with all relevant legislation, standards, code of practice and other requirements. To the fullest extent permitted by applicable laws, Nippon Sheet Glass Co. Ltd. and its subsidiary companies disclaim all liability for any error in or omission from this publication and for all consequences of relying on it. Pilkington and "Reflite" are the trade marks of Nippon Sheet Glass Co. Ltd.



CE marking confirms that a product complies with its relevant harmonised European Norm.  
The CE marking label for each product, including declared values, can be found at [www.pilkington.com/CE](http://www.pilkington.com/CE)



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