

Bulletin 12

Pilkington K Glass™ S Compliance Guide

November 2011

In Summary

Pilkington **K Glass™ S** is the new soft coat low-emissivity coated glass for all window applications. It can easily be incorporated into the existing Part L 1B (conservation of fuel and power in existing dwellings) compliance schemes of BFRC and Certass.

Pilkington **K Glass™ S** Compliance:

This guide is intended to ensure that all users of our new product, Pilkington **K Glass™ S**, understand its performance, how it can be integrated into existing compliance schemes and ratings, and also how it can achieve Building Regulation compliance in new applications.

Overview

Pilkington **K Glass™ S** is a single stock sputter-coated glass which can be used in both annealed and toughened formats, with the added advantage of retaining the same thermal performance and neutral appearance. Once fabricated into an Insulating Glass Unit (IGU) it can be used in all types of windows and in a variety of glazing applications from new build, to replacement windows in existing homes and conservatories. Pilkington **K Glass™ S** helps windows exceed Part L 2010 Regulations and provides an enhanced solution for changes expected in 2013 and 2016. When combined with Pilkington **Optiwhite™ E** in an insulating glass unit, it qualifies as Pilkington **energiKare™** energy-efficient glazing and can achieve a WER rating of A in all frame materials.

Key Technical Performance Data

Basic statistics in accordance with EN673 & EN410:

- Emissivity 0.05
- Centre Pane U-value 1.2 with 16 mm cavity and argon gas fill
- Total Solar Heat Transmission (g value)
 - 0.71 (with Pilkington **Optifloat™**)
 - 0.75 (with Pilkington **Optiwhite™ E**)

Additional performance data may be obtained via Pilkington Spectrum Online including U-values to 2 Decimal Places for use in Window Energy Rating Simulations.

There are two main ways of achieving compliance. The first is by determining the whole window U-value either by calculation or by a default construction specification that ensures the U-value criterion is met. The other way is via the Window Energy Rating method.

Whole Window or U_w Compliance

Under the requirements of Document L of the 2010 Building Regulations, replacement windows are required to meet a whole window U-value (U_w) of 1.6 – this means that when a thermal assessment is carried out it covers both the frame and glazing combined. Pilkington **K Glass™ S** will enable you to meet this requirement in a wide range of frame materials, frame sizes and window types.

Online Calculators are available to assist with this process to enable you to quantify the whole U-value of your window using a variety of frame materials such as PVCu, aluminium, steel or timber. A simple print-out can be produced to leave with your client on completion of the installation. This will enable them to demonstrate compliance with the Building Regulations if the installation is inspected by building control or a competent person's scheme, and also be available if the property is sold.

For further information, please visit www.bfrc.org and www.certass.co.uk

Whole Window 'Simple Method' U-value Default

This method of compliance was formulated by FENSA and there is also a Certass TRR equivalent default scheme. This default compliance method has been approved by the Department for Communities and Local Government (DCLG) and Local Authority Building Control (LABC). You are able to make a self-declaration for your window with a soft-coat low-e glass having a surface emissivity of 0.05 - Pilkington **K Glass™ S** meets this requirement.

The Simple Method requires a specific IGU specification as follows:

Outer Pane: Float Glass such as Pilkington **Optifloat™**
Inner Pane: Low-e 'soft coat' with emissivity of 0.05 such as Pilkington **K Glass™ S**
Cavity with a minimum width of 16 mm
Cavity filled with argon gas
Any Warm Edge Spacer Bar

So remember, all you are required to do is issue a self-declaration on company headed paper naming Pilkington **K Glass™ S** as your low-e glass and confirming the above IGU specification to your clients. They can then keep this on record as proof of compliance. This will enable you to meet the Building Regulation requirements in all types of PVCu windows such as casement, vertical sliding window or tilt / turn and hardwood timber windows with a minimum back to front depth of 70 mm, and softwood timber windows with a minimum back to front depth of 60 mm.

Window Energy Rating (WER) Compliance

In addition to the Whole Window U-value method of compliance, under the requirements of Document L of the 2010 Building Regulations, replacement windows can also comply by meeting a minimum Window Energy Rating or WER of Band C. Pilkington **K Glass™ S** will enable you to easily meet this requirement as well as WER higher ratings of B & A in a wide range of frame types and materials.

WER scheme operators BFRC and Certass TRR have confirmed that they are happy to accept new WER & DER applications which utilise Pilkington **K Glass™ S**.

Additionally, Pilkington **K Glass™ S** can be substituted for other low emissivity glasses providing the BFRC Substitution rules are adhered to e.g. the U-value of the modified unit has an equal or lower U-value and the g value of the unit is equal to or higher than the original specification. All other specifications of the IGU e.g. sealant and cavity etc. must also be maintained. There is no requirement for paper applications, but you must ensure all supplier and sales invoices are available for the independent assessor at the annual audit. Listed below are the relevant BFRC substitution rules.

- There shall be no charge for substitution of components. BFRC does however reserve the right to apply an administration fee in the future.
- Substitution of components in accordance with the BFRC rules are an endorsement to a BFRC Licence.
- A substitution will be reviewed on an annual basis.
- Labelling: When substitution has taken place the Energy Label will NOT be changed because the performance of the complete window will either be equal or better than that achieved by the original specified product (Detailed Energy Licence only).
- In the case of Energy Labels which do NOT display the ENERGY INDEX i.e. simply displaying A, B or C, the substituted product needs to remain within the same band or higher (Simplified Energy Licence only).

Please also note:

When combined with Pilkington **Optiwhite™ E** in an insulating glass unit, not only does it qualify as Pilkington **energiKare™** energy-efficient glazing but WER ratings of A can be achieved in all frame materials.

Pilkington **K Glass™ S** is a significant addition to the leading brand of low-e products, and can be simply integrated into your own existing and new product ranges.

If you have any questions relating to this guidance please do not hesitate to contact your Pilkington representative or customer contact centre on 01744 692000.



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