

Pilkington Activ™

FREQUENTLY ASKED QUESTIONS

1. General FAQs

What can I use to clean the glass?

Warm water with soap (e.g. washing up liquid) can be used, however please visit the technical update at www.pilkington.com/uk/technicalupdate, or download the 'Approved Glass Cleaning Agents' pdf from the literature section of the website for more information on what you can use.

Do I have to buy windows or can I buy a spray-on active film?

No Pilkington Activ™ is applied to the glass during manufacture, and there is no equivalent substitute. Ask for Pilkington Activ™ when your order your new windows or replacement glazing.

Where can I buy Pilkington Activ™ glass abroad?

Pilkington Activ™ is exported; however it is not available in all markets. Contact your local glass supplier.

How can I remove persistent stains (inc. sealant/concrete) without harming the coating?

Contact your local supplier or visit www.pilkington.com/uktechnicalupdate for more information.

Do any shower manufacturers use self-cleaning glass?

No, as it is internal. Self-cleaning glass requires both daylight and rain to activate the cleaning process.

What is the price of self-cleaning in comparison with normal double glazing?

We are unable to dictate the price installers charge, but there is normally a modest increase over standard glass.

Why do my windows look streaky in the sunlight?

If the glass is not fitted with Pilkington Activ™, the water runs down the window in rivulets, and tends to deposit any dirt in the rivulet in the streaks.

Will it work on North facing glass/glass that doesn't get a lot of direct sunlight?

Yes. There is enough UV light to activate the glass.

Can I just buy the glass rather than a whole new window unit?

Yes, it is available as either a single pane or an IGU. Contact your glass merchant.

Is it safe to use in other types of frames i.e. wood/aluminium?

Yes. All you need to do is follow installation guidelines.

What is the life-span of Pilkington Activ™?

The Pilkington Activ™ coating will last as long as the glass under normal circumstances.

Are there any plans to issue certificates of installation for Pilkington Activ™?

Yes, this is something that is available exclusively to Pilkington Activ™ Installers.

I am concerned about cleaning off sealant deposits:

Sealant deposits should be removed before they dry using a suitable solvent according to procedures outlined in the 'Handling and Processing Guidelines for Window Manufacturers', (this pdf can be downloaded from the literature section of the website). Residual deposits of cured sealant will be more difficult to remove and abrasive materials must not be used to aid cleaning.

My Installer has left handling marks on my windows following installation, how can I remove these?

Download the 'Approved Glass Cleaning Agents' pdf from the literature section of the website for advice on cleaning any specific marks off your windows (including paint).

Can you have frosted glass which is also self-cleaning?

Yes, you can use Pilkington Activ™ as the outer pane, with an inner pane of textured glass. Visit the Pilkington Building Products website at www.pilkington.com for more information on texture glass variations.

How do I find out about other Pilkington products?

Visit the Pilkington Building Products website on www.pilkington.com

2. Application FAQs

Is it true that Pilkington **Activ**[™] is only for use in domestic situations?

No, not at all. Pilkington **Activ**[™] Self-Cleaning Glass offers benefits for domestic, commercial and public sector applications. It is particularly beneficial in areas which are difficult to access for cleaning such as upper floor windows, conservatory roofs, other sloping roofs, atria and any building where the occupants find it difficult to clean their windows safely.

Can Pilkington **Activ**[™] be used in shop windows?

Yes, however it should be noted that Pilkington **Activ**[™] needs both daylight and rainfall to work effectively. Shops are often situated in covered walkways or malls where large projecting canopies may prevent sufficient daylight and rain from reaching the glass.

Is it OK to use Pilkington **Activ**[™] to achieve other performance benefits?

Yes. The Pilkington **Activ**[™] range must be on surface 1, the external surface of an insulating glass unit (IGU). Once incorporated into an IGU, Pilkington **Activ**[™] can be used in combination with an extensive range of products offered by Pilkington to achieve the required benefits.

For thermal insulation: Pilkington **Activ**[™] can be incorporated into IGUs with Pilkington **K Glass**[™] or Pilkington **Optitherm**[™]S4. If it is necessary to have a decorative glass as the inner pane, then Pilkington **Activ**[™] can be used with a low E glass laminated to a decorative glass inside, or alternatively Pilkington **Activ**[™] laminated to pattern and Pilkington **K Glass**[™] as the inner.

For solar control: Pilkington **Activ**[™] Blue or Pilkington **Activ**[™] Neutral can be used. This is a light blue tinted glass or neutral coloured glass with Pilkington **Activ**[™] on one surface. The Pilkington **Activ Suncool**[™] products are also available. This is a dual coated product with Suncool on the reverse side to Activ. Visit www.pilkington.co.uk/activ. Pilkington **Activ Optilam**[™] I, solar control laminate can also be used.

For security purposes: Pilkington **Activ**[™] can be toughened or laminated for safety or security applications.

For noise control: Pilkington **Activ**[™] can be combined with Pilkington **Optiphon**[™] for noise control.

For decorative purposes: Pilkington **Activ**[™] can be laminated to Pilkington **Stippolyte**[™] for decoration.

For fire purposes: Pilkington **Activ**[™] can be combined with Pilkington's fire products such as Pilkington **Pyrostop**[™] or Pilkington **Pyrodur**[™].

Is Pilkington **Activ**[™] suitable for internal use?

No. Pilkington **Activ**[™] needs daylight and rain in order to work properly so it may only be used externally.

Can Pilkington **Activ**[™] be used with frameless glazing?

Pilkington **Activ**[™] can be installed in a frameless glazing system such as Pilkington **Planar**[™]. It requires the use of specialist sealants that don't leach silicone. Information on these products are listed on the Technical Update that is available on www.pilkington.com/uk/technicalbulletin or by calling 01744 692000. It is also possible to butt joint panes of Pilkington **Activ**[™] using the specialist sealants listed above.

Is it acceptable to use Pilkington **Activ**[™] in Single Glazing?

Yes, providing that the system meets the requirements of the relevant Building Regulations. Pilkington **Activ**[™] can be provided in annealed, toughened and laminate forms.

3. Processing FAQs

Can I buy or make Insulating Glass Units (IGUs):

i). With Internal Georgian Bars?

Yes. The Georgian Bars sit between the two sheets of glass, and are not in contact with the Pilkington **Activ**[™] coating. However, where it is the intention of the customer not to replace all glazing with Pilkington **Activ**[™] the customer should be advised that the visual properties of Pilkington **Activ**[™] are different to clear glass. Therefore internal Georgian bars may look slightly different from those with clear glass.

ii). With Applied Bevels?

Yes, but the adhesive used to apply the bevels to the glass must be one that has passed Pilkington's compatibility tests. These products are listed on the Technical Update that is available on www.pilkington.com/uk/technicalupdate or by calling 01744 692000.

iii). For Timber framing systems?

Yes but only with sealants or glazing tapes, which have passed Pilkington's compatibility tests. Silicone products must not be used. Compatible products are listed on the Technical Update that is available on www.pilkington.com/uk/technicalupdate or by calling 01744 692000.

Note: Pilkington test regimes only confirm product compatibility with Pilkington **Activ**[™]. Sealant suppliers are responsible for testing the life span and/or recommending the suitability of their products for glazing and IGU manufacture.

iv). With Applied Leads?

Yes, but the make of leading used, and the adhesive used to apply it to the glass must have passed Pilkington's compatibility tests. It should also be patinated. These products are listed on the Technical Update that is available on www.pilkington.com/uk/technicalupdate or by calling 01744 692000. The customer should be made aware that applying leading, in effect breaks up the window into many small windows and this will change the water sheeting effect.

v). With Duplex, Cottage or Applied Georgian Bars/Bevels?

Yes, but the tapes used to adhere the bars to the glass must have passed Pilkington's compatibility tests. These products are listed on the Technical Update that is available on www.pilkington.com/uk/technicalupdate or by calling 01744 692000. These decorative bars, once installed, may act as a dam causing a build up of residual dirt along the edges of the applied bars.

Can I sandblast the Pilkington **Activ**[™] coating?

No. Any processing of this nature to the coated surface will result in the loss of self-cleaning characteristics permanently wherever the coating is damaged or removed.

Can we safety mark toughened Pilkington **Activ**[™] on the coated surface?

Pilkington recommends that wherever possible, the application of any safety mark should be to the non-coated surface. Where this is not practical however, the coated surface may be marked but great care is necessary.

Does the toughening process affect the colouring of Pilkington **Activ**[™]?

Only in cases of excessive temperatures. Pilkington **Activ**[™] is toughened to a similar process as uncoated glass, and if over heated the **Activ** properties can be reversely altered.

Can a Pilkington **Activ**[™] IGU be manufactured with a silicone seal?

Yes with care, as long as there is no silicone contact with the Pilkington **Activ**[™] surface, causing contamination at any stage. A silicone sealed unit is normally glazed to ensure that moisture could not reach the seal and eventually drain onto the glass.

How do you cover the sealant from UV attack in a stepped unit?

Use a silicone unit seal, or alternatively we would recommend covering the seal with a lead strip. The lead should be treated with **Leadshield**[™] or Patination oil to reduce potential of carbonate run off. In this type of application, run off is generally not an issue as the stepped edge is normally at the bottom of the glazing. Conservatories, however, pose a greater potential risk of run off, carrying lead carbonate from flashing onto the glass roof below. This can lead to marking of any glass type, not just Pilkington **Activ**[™].

4. Technical FAQs

What is the current situation regarding compatibility with dry gasket glazing systems?

All glazing systems where the gasket is lubricated with silicone oil are incompatible with Pilkington **Activ**[™]. Leaching from these product types onto the glass coating will create a hydrophobic area around the edge of the glass known as "picture framing", which is unacceptable to customers. The same is true of many silicone based rubber gaskets. However, there are many gaskets that are compatible with Pilkington **Activ**[™], e.g. gaskets that are part of a co-extruded system, a dry gasket used without lubricant, or a gasket using an alternative lubricant such as glycerine oil. These products are listed on the Technical Update that is available on www.pilkington.com/uk/technicalupdate or by calling 01744 692000.

Are EPDM gaskets silicone-free?

Some are. A list of gaskets that have passed Pilkington's compatibility tests can be found on the Technical Update that is available on www.pilkington.com/uk/technicalupdate or by calling 01744 692000. If you wish to use a gasket not currently on our list, please submit to Pilkington for testing.

How do we comply with Part L in units requiring Texture Glass for privacy and Pilkington **Activ**[™]?

By using new Pilkington **Activ Stippolyte**[™] Laminated Glass as the outer pane of the IGU and Pilkington **K Glass**[™] as

the inner pane. Details can be obtained from your local Pilkington branch. It is also possible to manufacture a triple glazed unit with Pilkington **Activ**[™] on the outer pane, the Pilkington Texture Glass of your choice as the middle pane and Pilkington **K Glass**[™] as the inner pane. (Alternatively see question Is it ok to use Pilkington **Activ**[™] to achieve other performance benefits? found on the Application FAQs Page)

Does Pilkington **Activ**[™] clean off finger prints?

Pilkington **Activ**[™] will clean off finger prints but it may take a period of time, dependent upon environmental conditions. It may take as long as several weeks. Pilkington suggest customers avoid touching the glass wherever possible, as fingerprints may act as a key for inorganic dirt to stick to and therefore appears worse. Pilkington also recommend that installers wear gloves for avoidance of fingerprints and traces of contaminants from other glazing compounds, silicone in particular, which is difficult to remove.

Do dust and dirt particles stick to Pilkington **Activ**[™] more than to normal float glass in dry weather?

In dry weather, Pilkington **Activ**[™] destroys organic dirt, but inorganic dirt is not washed off. However, there is no difference in the amount of dirt or dust that sticks to Pilkington **Activ**[™] compared to normal glass. This has been shown in laboratory tests and real life tests in the dusty Arizona Desert.

What effect do PVC cleaners have on the coating?

Several brands have been tested. If and when used, the agent needs to be rinsed off the glass with warm water and soap (e.g. washing up liquid), which should ensure that the coating remains unharmed. There is a list of suitable cleaners on the Technical Update that is available on www.pilkington.com/uk/technicalupdate or by calling 01744 692000.

Is Pilkington **Activ**[™] Nanotechnology?

Pilkington **Activ**[™] has been cited as an example of Nanotechnology. Whilst the coating is nanometres thick it is really a development of thin film technology, rather than being a specific Nanotechnology product. The name nanotechnology is usually applied to the scientific investigation or application of particles and/or structures, which have sizes of less than one hundred nanometres. Particles or structures of this size can have unique properties compared to bulk materials. Pilkington **Activ**[™] is based on a thin film of titanium dioxide rather than particles of titanium dioxide and the film is approximately 15 nanometres thick. Whilst falling under the broad definition of nanotechnology we feel it is best referred to as a development of thin film technology. The coating is applied by a process called chemical vapour deposition which involves the pyrolytic addition of chemicals on a hot glass substrate to form a thin film. This process is conducted as the glass is manufactured.

Does silicone permanently damage the coating?

No it just blocks the effectiveness of Pilkington **Activ**[™]. Once silicone is removed, Pilkington **Activ**[™] resumes it's normal self-cleaning properties. It should be noted that silicone contamination is very difficult to remove effectively, so if your fitter has left silicone marks on the windows, they should be called back to remove any contaminations with specialist treatments.

Will my Pilkington **Activ**[™] glass ever get dirty?

When there are long dry spells there will not be any rainwater to wash off loosened organic dirt and organic particles. Light use of a hosepipe can simulate rain and clean the glass. If the glass is overwhelmed by a contaminating source, for example a large tree, the self-cleaning properties may not keep up with the rate of organic material falling on the glass, and the glass may need to be cleaned to remove any heavy deposits of tree sap.

Is Pilkington **Activ**[™] suitable for coastal areas?

Salt deposits from salt spray are inorganic. Rain normally removes this but if there is a long dry spell then you may have to resort to using a hose pipe to simulate rain. Pilkington **Activ**[™] is tested for resistance to salt spray.

Why is there a limit for the slope of roofs and Pilkington **Activ**[™]?

Pilkington **Activ**[™] needs both daylight and rain to work effectively. When the roof angle gets too low the rain does not wash the loosened dirt off as effectively. A good flow of water across the glass is beneficial. Pilkington **Activ**[™] still gives better results than ordinary glass with low angle roof applications. We recommend a minimum angle of 10 degrees, but 30 degrees or more is ideal.

Does Pilkington **Activ**[™] use bacteria to break down the deposits?

No. On the contrary the process is photocatalytic and is anti bacterial. This prevents fungi and mould growth that might start to build on ordinary glass.

Can you advise me of the heat reflection, thermal insulation and UV protection values of Pilkington **Activ**[™] Blue?

For a single pane of 4mm Pilkington **Activ**[™] Blue the UV transmission is 15%. If you want to reduce the UV transmission to very low levels, install Pilkington **Activ**[™] as part of an insulating glass unit with the other pane being Pilkington **Optilam**[™]. Note that even with very low UV transmission levels there is still a risk of fading and UV damage to furnishings etc. due to the power of the sun and the long periods of exposure behind the glass.

5. Identification FAQs

How do I know Pilkington **Activ**[™] has been supplied?

The glass may carry a label on one of the surfaces stating that there is a Pilkington **Activ**[™] coating and specialists may carry a Pilkington **Activ**[™] coating detector. A simple test is to spray water at the surface and compare it with ordinary glass, see it sheet off the glass rather than form lots of rivulets. Silicone contaminated surfaces will also form rivulets similar to non Pilkington **Activ**[™] glass.

Will each Pilkington **Activ**[™] unit arrive wrapped or protected in some way other than the normal protection pads?

This depends on the decision of the IGU supplier. Pilkington Insulight **Activ**[™] units will generally not be supplied with any special protection, other than standard protective pads. Care should also be taken when choosing protective film especially where the film may be adhered to the unit for long periods of time. A list of suitable protective films can be found on the Technical Update that is available on www.pilkington.com/uk/technicalupdate or by calling 01744 692000. However, correct handling, transportation, storage and installation of Pilkington **Activ**[™] units should mean that the product does not require protective film.

Will Pilkington Insulight **Activ**[™] units be supplied with edge tape?

No. Sealed units manufactured by Pilkington will not generally have edge tape.

Will we be permanently marking Pilkington **Activ**[™]?

No, every Pilkington **Activ**[™] unit can be labelled on surface 4 with a Pilkington **Activ**[™] instruction label for Installers and Consumers. The installer should leave these labels intact whilst installing and beyond as a demonstration to the customer that the product contains Pilkington **Activ**[™]. Consumers should always be left with a copy of the cleaning and maintenance guidelines, which are included in the back of the A5 Consumer brochure.

6. Testing FAQs

Were real life tests carried out on Pilkington **Activ**[™] before it was released?

Yes, glass was installed and monitored at various locations round the world. These were chosen to test the glass under a variety of weather conditions. The glass was tested for six months in the Arizona Desert, six months in Florida, twelve months in Ohio in the USA, twelve months in Gelsenkirchen in Germany and thirty months outside our Technology Centre in the north west of England.

What were the results of the real life test?

The longest real life test was in the north west of England and lasted thirty months. During that time, measurements of how dirty the glass looked were taken every two weeks. During the thirty months, there was only one occasion when the Pilkington **Activ**[™] looked dirtier than the normal glass.

Is there a British or European Quality Standard for self-cleaning glass?

As self-cleaning glass is such a new product, there is not yet a quality standard to measure it against. Pilkington is working with other glass manufacturers, Standards Institutes and universities to formulate recommendations for such a standard. At present, Pilkington **Activ**[™] is tested against EN 1096 Part 2 but this concerns the durability of the coating not how good it is at self-cleaning.

7. Marketing FAQs

What is Pilkington's marketing strategy for Pilkington **Activ**[™]?

On the commercial project side, we are increasing awareness of Pilkington **Activ**[™] Self-Cleaning Glass and Pilkington **Activ Suncool**[™] among Architects, through advertisements, award sponsorship and competitions. At the same time, we are targeting Architects who have live projects that may be suitable for Pilkington **Activ**[™]. We are also targeting marketing effort at the social housing market, where there are considerable opportunities in three storey and above dwellings, plus consumers via TV advertising, radio and PR.

Does the unit come with the Logo on or does the Installer have to apply it?

We encourage IGU manufacturers that all Pilkington **Activ**[™] units should have the logo label with Installer and Consumer instructions applied by the IGU manufacturer.

Are there still Pilkington **Activ**[™] Partners?

No the Partner arrangement was a short-term arrangement for the launch period, which ended on 31st March 2003. We now encourage Installers to go onto the Pilkington **Activ**[™] Supplier Finder.

I have some literature, which refers to a hologram?

This was used during the launch period and has now been withdrawn.

How do I pronounce the brand name?

The product is pronounced as Active not Acteev.

How do I get my company on the Pilkington Activ™ Installer finder?

Firstly you need to be an installer, trade suppliers aren't eligible (however we are keen that their installer customers are on the site). There is then a simple form that needs to be completed. Copies of this are available from pilkingtonactiv@respond.uk.com or from the helpline on 01744 692000.

Will IGU samples combined with Pilkington K Glass™ be available?

You should obtain any samples you require from your IGU supplier. It is recommended that samples are used for appearance purposes only. This is because Pilkington Activ™ needs 5-7 days exposure to UV light to charge the coating initially and regular exposure afterwards. This means that samples kept in salesmen's cars for example would not properly demonstrate the self-cleaning characteristics of the product.

Will there be any further marketing support from Pilkington?

Yes. There will continue to be strong ongoing PR and sales support for this product. The aim being to help in building consumer awareness of Pilkington Activ™ via TV commercials, and providing you with the materials and other support you need to help you to sell successfully. You are encouraged to carry out your own marketing activity at a local or regional level to reinforce the message to consumers and achieve your own added value sales. Please refer to the Advertising and Identity guidelines.

What is the average cost of cleaning a commercial building?

Pilkington did a survey to answer this question and concluded that there is no typical case. Most architects we spoke to agreed that there are too many variables, such as size of building, amount of glazing, accessibility, and the attitude of the owner, to quote an average. However, low rise buildings, those of four stories and under, tend to cost £2000 per annum. Medium rise buildings of five to eight stories tend to cost £5000 per annum. And for taller buildings, the bill can be up to £50000 per annum, depending on how tall they are. These do not include the cost of the capital cleaning equipment installed when the building is built. Visit www.pilkington.co.uk/activ for the BRE (Building Research Establishment) summary.

8. Product Improvements FAQs

When will 8mm and 10mm Pilkington Activ™ be available?

Pilkington Activ™ Clear and Blue are available from stock in the above thicknesses. Pilkington Activ™ Neutral is only available in 4mm.

Do you have any plans to produce Pilkington Activ™ in colours other than Clear, Blue or Neutral?

At present no; if other colours are required it is possible to laminate Pilkington Activ™ with a variety of tinted interlayers i.e. Pilkington Activ Optilam™ T (Brown, Grey, Green and translucent white) to laminate a Optifloat tinted glass to Pilkington Activ™.

If you have any further questions, please contact us via the Helpline on 01744 692000.



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