



## Glass cleaning techniques recommended by Pilkington IGP

Pilkington IGP is one of the leading manufacturers of insulating glass units and single glass panes. We provide a basic advise about installation, cleaning and maintenance of our products offering available on our website.

To maintain confidence in quality of our products we have decided to expand information about glass cleaning issues. We are aware of glass cleaning procedures used by glass cleaning companies and of a danger related to an equipment used by some of those businesses.

Pilkington IGP have made many internal tests of glass cleaning techniques and commonly used equipment for glass cleaning.

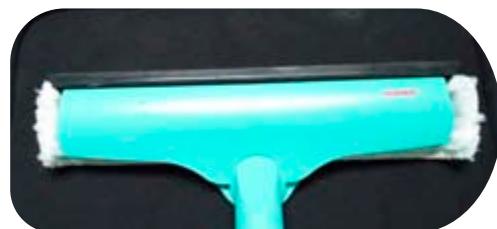
### About our tests

Pilkington IGP have tested various methods of cleaning standard float glass, laminated glass and toughened glass (glass with higher mechanical strength).

On the photo below you can see two types of glass panes (toughened and non-toughened glass) prepared for cleaning process. Both of them were dirty with dust, sand and mortar – typical types of dirt that can appear on the building site.

Glass panes contaminated with mortar.

**Method recommended by Pilkington IGP with the use of proper equipment and a large amount of water.**



Hand window cleaner with a soft material cover (e.g. microfiber cloth) or soft cloth and rubber squeegee should be used as washing equipment. A large amount of water is necessary for glass cleaning as water is an universal neutral solvent for most of dirt.

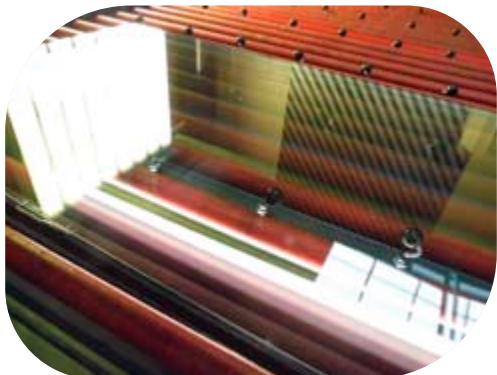
We recommend the following steps of glass cleaning process:

- At first please carefully rinse the glass thoroughly with clean water to remove as much dust, stones, sand and any kind of dirt as possible, as all of them may scratch the glass surface.
- Secondly remove remaining dirt from the glass gently and also with a large amount of clean water using the hand window cleaner with soft material cover (or soft cloth). Please remember to rinse the soft material with water to remove dirt as frequently as possible.
- Thirdly check if there are no stones, dust, sand or any dirt left on the glass that could scratch its surface. If the glass surface is clean remove water by rubber squeegee.

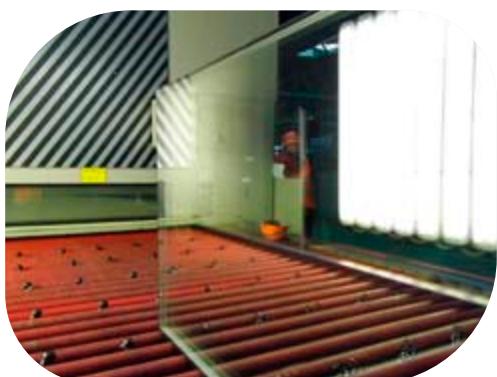
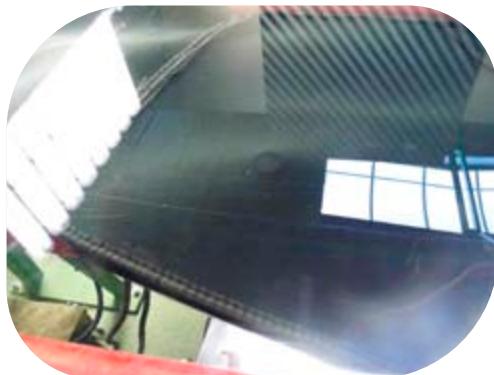
The results of glass cleaning with the use of the method described above are shown on the below photos.



Both glass panes (toughened and non-toughened glass) were treated with a soft material and a large amount of water flush. Clean water easily solved the dirt on the glass surface. In our tests there were no surface damages on the glass surface after glass cleaning.



surface could leave some smudges. Sand and stones from mortar mixture can easily scratch the glass. In our tests the quality of both glass panes after cleaning was very poor. Scratches run with a pattern of movements of squeegee during cleaning (see photos below).



The results of glass cleaning with the use of the method recommended by Pilkington IGP – no surface damages.

The results of glass cleaning with the use of a small amount of water – visible surface damages.

## Common methods used by cleaning companies and similar business

### **Method with the use of proper equipment and a small amount of water.**

The secret in effective and not harmful way of glass surface cleaning lays in a proper removal of sand, stones, dust from the glass surface as described earlier. If there is not enough water used for the cleaning process, water or cleaning material will be dirty – contaminated with sand and dust that might damage the glass surface during cleaning and result in scratches visible on its surface.

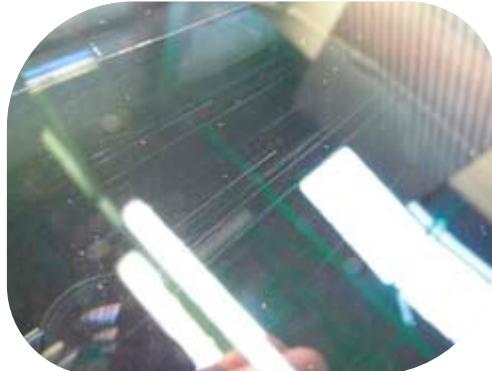
The water used for cleaning has to be clean and the cleaning equipment has to be free from any mud, dust, stones etc., because they may scratch the glass surface. Furthermore the glass surface has to be cleaned gently. Such method of glass cleaning (with a small amount of water) may cause that possible deposit of mortar on the glass

### **Method with the use of steel blade equipment and rubber squeegee**



Commonly used equipment that consist of a steel blade and a rubber squeegee is shown on above photos. With this type of equipment it is possible to remove stones, dust, sand and most types of dirt from the glass surface in a fast and easy way. Unfortunately scratches will appear as a result of steel-glass surface contact. Such a method even with the use of a large amount of water will not give positive results i.e. scratch-less surface. Water, as a neutral natural solvent, will help to remove dirt from the glass but will not secure glass surface from scratches if the hard material (steel blade) is used as a cleaning equipment.

The use of such equipment for glass cleaning will destroy the glass surface. Steel materials will always scratch the glass surface independently of the type of glass. In our tests after cleaning scratches have appeared on toughened glass as well as on non-toughened glass surface.



The results of glass cleaning with the use of steel blade – visible surface damages.

### Conclusions

Pilkington IGP recommended method of glass cleaning is a good solution to avoid scratches on the glass surface that may appear on the glass after cleaning. If you obey the rules there will no danger for physical damages on the glass surface during cleaning. Pilkington IGP can state that every type of glass can be easily scratched by improper cleaning method. Do not allow any sharp, rough or hard objects to come into contact with the glass surface. Make sure that cloths, squeegees and other tools that are used for glass cleaning are in good condition at all times. Always execute glass cleaning in safe conditions.

Please also be acquainted with our Installation, cleaning and maintenance guidelines available on our website for all Users of Pilkington IGP's products:

<http://www.pilkington.com/en/pl/odbiorcy-szkla/ocena-jakosci-wyrobów-i-informacje-dla-uzytkownikow-wyrobów-pilkington-igp>

