Processing guide for PLANIBEL

2006

Updated information on products, product availability and processing guidelines are regularly updated on the AGC Flat Glass Europe website:
www.YourGlass.com

Table of Contents

1. Packaging

Planibel glazings are available in standard sizes: PLF (bulk: A or L frames), DLF (bulk: A or L frame, endcap).

The sheets of glass are separated by a powder interlayer.

The exact contents of each package are indicated on the label affixed to the edge of the pack or packaging.

2. Unloading

Unloading PLFs

- The rack must be positioned on perfectly level ground;
- Use the appropriate clamp;
- Handle one pack at a time;
- The clamp must be perfectly centred;
- Prevent any damage to the glass by using protective materials in those areas where there is contact with the glass.

Unloading DLFs

Bulk packaging :

- The trailer must be positioned on perfectly level ground;
- Release the straps and blocks;
- Use the appropriate clamp or sling;
- Handle one pack at a time;
- The clamp must be perfectly centred;
- The slings must be positioned under the pack, at the ends. The angle between the slings must be no more than 90°;
- Prevent any damage to the glass by using protective materials in those areas where there is contact with the glass.

Packaging on L frames :

- The trailer must be positioned on perfectly level ground;
- Release the straps and blocks;
- The posts must NOT be opened at this stage;
- Use an appropriate lifting beam, with a double hook at each end (see diagram on frame);
- Handle one frame at a time;
- Check that the glass is correctly centred on the frame before lifting.

Packaged in wooden endcaps :

- The trailer must be positioned on perfectly level ground;

- Release the straps and blocks;
- The strapping on the endcaps themselves must NOT be cut at this stage;
- Use slings or an appropriate lifting beam;
- The slings must be positioned under the upper or lower ends of the endcap;
- The angle between the slings must be no more than 90°;
- Handle one endcap at a time.

General notes:

- Clamps, slings, lifting beams and other hoisting equipment must comply with prevailing regulations and be approved by the relevant authorities;
- Ensure the safety of personnel at all times. Keep all unnecessary personnel out of the handling area. Wear appropriate personal protective gear;
- Personnel must have received the required training.

3. Storage

Correct storage helps prevents deterioration caused by the following hazards:

- chemicals: surface defacement caused by water, moisture or condensation;
- mechanical hazards: surface accidents, breakage, etc.

Ideal storage areas are well ventilated and out of sunlight to prevent the risk of thermal stress. AGC recommends maintaining a temperature of between 15 and 25 °C and a relative humidity of less than 80%.

Glazings showing signs of moisture due to temperature fluctuations during transport must be dried or installed as soon as possible.

Factory racks are used for transport packaging; they are not meant for storage. Consequently, glazings must be stored on racks with interlayers for each pack. The same sizes should be stored together.

As a general rule, AGC recommends ensuring proper rotation of stored glazings.

4. Handling PLFs and DLFs

Handling PLFs :

- PLFs must be lifted with a suction pad lifting beam or with an automatic unstacking machine ;

- Labels and/or tape on the edge of the pack must be removed before handling PLFs ;

· The lifting beam must be properly centred ;

· The PLF must first be lifted slightly, and then moved away from the others ;

· Care must be taken to prevent scratches by ensuring that the edge of one PLF does not rub against the surface of another PLF.

Handling DLFs :

Bulk packaging :

· DLFs must be lifted with a suction pad lifting beam or with an automatic unstacking machine ;

· Labels and/or tape on the edge of the pack must be removed before handling DLFs ;

· The lifting beam must be properly centred ;

· The DLF must first be lifted slightly, and then moved away from the others ;

· Care must be taken to prevent scratches by ensuring that the edge of one DLF does not rub against the surface of another DLF.

Packaged in L frames :

· Ensure that the pack rests on the uprights, not on the posts ;

· Open the posts ;

· Remove the posts ;

· DLFs must be lifted with a suction pad lifting beam or with an automatic unstacking machine ;

· Labels and/or tape on the edge of the pack must be removed before handling DLFs ;

· The lifting beam must be properly centred ;

· The DLF must first be lifted slightly, and then moved away from the others ;

· Care must be taken to prevent scratches by ensuring that the edge of one DLF does not rub against the surface of another DLF.

Packaged in wooden endcaps :

· Set the endcap on a support inclined at a slight angle (5°) ;

· Cut the vertical strapping ;

· Remove the upper cover and then the 2 side covers ;

- Remove the plastic protecting the glass ;
- DLFs must be lifted with a suction pad lifting beam or with an automatic unstacking machine ;
- Labels and/or tape on the edge of the pack must be removed before handling DLFs ;
- The lifting beam must be properly centred ;
- The DLF must first be lifted slightly, and then moved away from the others ;
- Care must be taken to prevent scratches by ensuring that the edge of one DLF does not rub against the surface of another DLF.

General notes :

- Suction pads must be perfectly clean ;
- Any direct contact with hard materials must be avoided ;
- Suction pad lifting beams and other hoisting equipment must comply with prevailing regulations and be approved by the relevant authorities ;
- Personnel must check that the suction pads are adhering correctly before any further manipulation ;
- Ensure the safety of personnel at all times. Keep all unnecessary personnel out of the handling area. Wear appropriate personal protective gear ;
- Personnel must have received the required training.

5. Cutting

Below are several recommendations that should be complied with when cutting Planibel glazings :

- The cut must be lubricated using a volatile oil that is easy to wash off ;
- Cut sheets must be separated by a spacer.

Working conditions

- Cutting personnel must wear clean gloves ;
- All tools, conveyors, etc. that might come into contact with the glass must be kept clean ;

- When using templates, special care must be taken to ensure that the templates are clean.

6. Shaping

Below are several recommendations to comply with when shaping Planibel glazings :

- Check that the shaping equipment settings are correct for this type of glass ;
- If a liquid is used during the shaping process, it must be chemically compatible with this type of glass and easy to wash off ;
- AGC recommends carrying out tests before starting the process.

Working conditions

- Shaping personnel must have received the required training and must wear clean gloves ;
- All tools, conveyors, etc. that might come into contact with the glass must be kept clean.

7. Washing

Planibel glazings must be washed with clean water. A small quantity of a mild detergent solution which does not contain any abrasives or acids (specifically chlorine, fluorine or alkalis) may be mixed into the water.

Before washing the glazings, make sure to remove all residue and particles that could scratch the surface of the glass (grains of sand, glass splinters, iron oxides, etc.).

If the glazings are washed in an automatic machine it is important to check regularly the wash water as well as the cleanliness and hardness of the brushes in the washing machine so as to prevent the build-up of abrasives. Doing so will help prevent any damage to the surface of the glass.

Glass must be dried immediately after washing and must be dried thoroughly. AGC recommends regularly checking the filtration quality of the air used to dry the glazings.

8. Assembly in insulating glazing

Planibel glazings can be assembled in insulating glazing. First, however, the glazing must be thoroughly rinsed and dried to prevent any traces of drops on the glass.

There are no special recommendations for the assembly process itself.

9. Toughening

Planibel glazings can be toughened. Below are several recommendations to comply with during the toughening process :

- The glazings must be shaped before being toughened ;
- The glazings must first be thoroughly washed and dried ;
- Prior to toughening, markings (such as a quality label) can be applied to the side of the glass that is not in contact with the rollers in the toughening furnace. First check compatibility with and adhesion to the glass ;
- AGC recommends placing the sheets in the toughening furnace so that ultimately they are oriented in the same way on-site. The base of the sheet is generally parallel to the rollers in the toughening furnace ;
- AGC recommends carrying out tests prior to starting the process.

Working conditions :

- Toughening personnel must have received the required training and must wear clean gloves ;
- All tools, rollers, etc. that might come into contact with the glass must be kept clean.

10. Lamination

Planibel glazings can be laminated. First, however, the glazing must be thoroughly rinsed and dried to prevent any traces of drops on the glass.

There are no special recommendations for the lamination process itself.

11. Curving

Planibel glazings can be curved. Below are several recommendations to comply with during the curving process :

- Check that the settings of the bending oven are correct for this type of glass ;
- The glazings must first be shaped along all edges ;
- The glazings must first be thoroughly washed and dried so that both sides of the glass are free of any residue (oil, fingerprints, etc.) and particles (grains of sand, pieces of glass, iron oxides, etc.) ;
- Any markings (such as a quality label), silkscreen printing an enamelling must be applied to the glass prior to bending. They must be applied to the side of the glass that is not in contact with the templates used for bending the glass. The ink used must be chemically compatible with this type of glass.

Working conditions

- Glass bending personnel must have received the required training and must wear clean gloves ;
- All tools, rollers, etc. that might come into contact with the glass must be kept clean.

12. Enamelling / Silkscreen printing

Planibel glazings can be enamelled. Below are several recommendations to comply with during this process :

- Check that the enamelling parameters are appropriate for this type of glass ;
- The glazings must first be shaped along all edges ;
- The glazings must first be thoroughly washed and dried so that both sides of the glass are free of any residue (oil, fingerprints, etc.) and particles (grains of sand, pieces of glass, iron oxides, etc.) ;
- The ink used must be chemically compatible with this type of glass.

Working conditions :

- Enamelling personnel must have received the required training and must wear clean gloves ;

- All tools, rollers, etc. that might come into contact with the glass must be kept clean.