



MIROX MNGE & 4GREEN+ PROCESSING GUIDE

VERSION 5.0 – NOVEMBER 2024

Your Dreams, Our Challenge

- At each stage of the production process the personnel involved must wear the personal safety equipment required for the work, e.g. safety gloves, safety footwear and safety glasses.
- The personal safety equipment, along with auxiliary means, and all other materials that may come into contact with the coating must be tested beforehand with regard to their compatibility with this latter. AGC accepts no liability for any damages which may ensue from the use of non-approved materials or from materials incorrectly applied.

This version of the guide replaces and cancels all previous versions.
Please regularly check www.agc-yourglass.com for any updates.

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1. PACKAGING

Appropriate packaging prevents the glass from damage caused by:

- **Chemical risks:** marks on the surface caused by rain (water falling directly on the glass in the packs) or condensation (as a result of a change in temperature);
- **Mechanical risks:** accidents involving the surface of the glass, breakages and so forth.

Mirox MNGE and Mirox 4Green+ mirrors are available in standard dimensions: PLF, DLF, MF (see the Product Catalogue at www.agc-yourglass.com).

A label affixed to the edge of the pack indicates the exact contents of each load.

Label	Explanations
XXXXXX-XX-XXX	Pack number
PLANIBEL CLEAR	Colour of the float
MIROX 4Green+ SAFE+	Product code (*)
6 MM	Thickness
255.00*321.00CM	Dimensions in cm
0024 sheets	Number of sheets
000196.56 m ²	m ² per pack
001916.46 kg	net weight

(*) Product code

MIROXMNGE = MIROX MNGE mirror
MIROX4Green+ = MIROX 4Green+ mirror
SAFE+ = Transparent splinter-free film

2. STORAGE

Upon receiving your order, check the condition of each pack of glass carefully and report any breakages, moisture, humidity or serious defects:

- either to the carrier, who must record your observations in and append the appropriate documentation to the CMR document;
- or to AGC (either to your AGC representative or directly to the factory).

This must be done within seven days of receipt.

The product must always be:

a. unpacked as soon as possible;

b. stored as follows:

- vertically on a soft surface, such as wooden boards with spacers;
- in a dry, well ventilated place that is not subject to major temperature fluctuations, so as to avoid condensation;
- away from sources of heat and corrosive materials or agents such as organic solvent vapours, chemicals, acids or fuel;
- never outside.

Storage time depends on the aforementioned conditions.

3. LIFTING

General comments:

- Direct contact with hard materials must be avoided.
- Labels and/or tape on the edge of the pack must be removed before handling.
- Lifting gear must be properly centred.
- Each sheet must first be lifted slightly and then moved away from the others.
- Care must be taken to prevent scratches, especially when handling coated glass, by ensuring that the edge of one sheet does not rub against the surface of another.
- Suction lifting gear 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 handling.
- Ensure the safety of personnel at all times. Keep all unnecessary personnel out of the handling area. Wear appropriate personal protective equipment.
- Personnel must have received the required training.

Specific handling:

PLF/DLF:

- Sheets must be lifted using either suction lifting gear or an automatic unstacking machine.
- Proceed as described in the general comments.

L-frames, Lost L-frames, returnable and dismountable frames:

- Ensure that the pack rests on the stiles, not on the posts.
- Open the posts.
- Remove the posts.
- Proceed as described in the general comments.

Wooden endcaps:

- Set the endcap on a stile inclined at a slight angle (5°).
- Cut the vertical strapping.
- Remove the upper cover and then the two side covers.
- Remove the plastic protecting the glass.
- Proceed as described in the general comments.

SAFE+ Products:



- Static electricity may build up while unloading SAFE+ products after transport.
- You can discharge the build-up of static electricity by using insulated wire to ground personnel.

4. QUALITY CHECKS

We recommend performing quality checks based on the requirements of standard EN 1036-1:2007 for the following visible factors: float glass defects, optical deformation, scratches, dimensions, etc.

5. CUTTING

- The cutting and transfer tables must be covered with felt and **cleaned frequently** to avoid scratches caused by small glass splinters that could damage protective paints and varnishes.
 - Reduce the pressure applied to the cutting tool to avoid splinters.
 - When starting, cut slowly and build up pressure until you achieve a good cut.
 - Use small quantities of **neutral** cutting oils (e.g. ACECUT 5503 cutting oil or equivalent).
 - AGC advises using the cutting wheels mentioned in the table below to successfully cut the glass with SAFE+ safety backing film through the film side.
- Please consult the following website to find those cutting wheels:
www.agc-store.com.
- Correct cutting settings can differ from one cutting installation to another and can be tested by cutting test strips 100mm wide and at least 1m long. It should be possible to break the cut strips by hand.
 - The cutting wheels listed below can also be used to cut non-painted glass without a SAFE+ film.
 - AGC provides this information for advisory purposes. The user/customer is solely responsible for using this advice.

Cutting wheel	Angle (°)	Thickness (mm)	
B0 03A100M	100	3-4	
B0 03A110M	110	4-5	
B0 03A115M	115	5-6	
Cutting wheel including plastic holder			
B0 416A100M	100	3-4	
B0 416A110M	110	4-5	
B0 416A115M	115	5-6	

6. EDGE PROCESSING & DRILLING

Edge grinding	YES
Edge treatment	YES
Drilling	YES
Serrations	YES

- Processing quality depends on clean cutting.
- Adjust the speed of the processing machine according to the number of grinding wheels fitted to it and the thickness of the glass.
- If using spherical grinding wheels, avoid overly angular shapes. It is advisable to use one type of grinding wheel per thickness of glass.
- If processing a flat joint with arrised edges, avoid edges with an angle greater than 145°.
- Processing on the painted side of mirrors must be smooth and free of glass shards to prevent the risk of corrosion.
- Use non-abrasive coolant additives (neutral pH) to prevent damage being caused to the mirror's protective coatings.
- Clean the cooling water circuit regularly to remove glass particles and plastic particles originating from the SAFE+ safety backing film.
- Wash processed products immediately, preferably with deionised water, and dry carefully, especially around the edges.
- Use spacers when stacking processed products.

7. LAMINATING

Mirox MNGE and Mirox 4Green+ are coated glass products for use in interior applications only. They cannot be laminated or used in double glazing units, even on the inner side of the glazing unit. The plastifiers in the PVB would have a negative influence on the paint coating.

For mirror with impact safety properties, AGC offers 2 options:

- Mirox SAFE+, monolithic mirror (Mirox MNGE or Mirox 4Green+) with a safety film on the back.
- Stratobel Mirox, a laminated mirror product assembled with one or more PVB interlayer(s), together with a special mirror paint that is compatibility with the PVB interlayer(s).

Both options are classified type B breakage mode for impact safety meaning that glass fragments are held together by the film or PVB interlayer (s).

Furthermore, Stratobel Mirox with 2 (or more) PVB interlayers is rated 1B1 and offers superior protection properties in case of impact.

8. SANDBLASTING

Both Mirox MNGE and Mirox 4Green+ may be partially sandblasted.

9. PACKING THE PROCESSED PRODUCT

- Place the sheets vertically on or in the packing material, taking care to **avoid scratches caused by stacking** (see storage).
- Use soft spacers, e.g. wood powder, or medium particle size polyolefin based interleavant powder, but **avoid organic products** such as Lucite beads, as these can scratch paintwork.
- When shrink-wrapping, perforated plastic may be used if the glass is to be stored in a dry area for a normal length of time.

10. CLEANING

The following instructions are valid for initial cleaning after installation, routine cleaning and special maintenance:

- Both Mirox MNGE and Mirox 4Green+ mirrors can be cleaned only with clean water.
- For Mirox MNGE and 4Green+, ammonia-based or other abrasive products, such as anti-limescale products, must never be used.
- Detergents with pH<2 or pH>12 must never be used.
- The mirror must be dried immediately after cleaning, especially around the edges.
- For further, more detailed cleaning instructions, please consult the “Cleaning Guide” section in the Mirox “Installation Guide” on www.agc-yourglass.com.