

MIROX MNGE & 3G

PROCESSING GUIDE



VERSION 1.0 – NOVEMBER 2013

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



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1. PACKAGING

Appropriate packaging prevents the glass from being damaged 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 to the surface of the glass, breakages and so forth.

Mirox mirrors are available in standard dimensions: PLF, DLF, MF (see Product Catalogue on www.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 3G 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

MIROX3G = MIROX 3G mirror
MIROXMNGE = MIROX MNGE mirror
SAFE+ = Transparent splinter-free film

2. STORAGE

Upon receiving orders, check the condition of each pack of glass carefully and indicate any breakages, moisture, humidity or any serious defects

- either to the carrier – who must record your observations and the appropriate documentation on the CMR document
- or to the 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 will depend on the aforementioned conditions. AGC recommends that shelf life of mirrors Mirox 3G and MNGE should not exceed six months.

3. LIFTING

General comments:

- Any direct contact with hard materials must be avoided.
- Labels and/or tape on the edge of the pack must be removed before handling.
- The lifting gear must be properly centered.
- Any 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 gear.
- 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 in the general comments.

L-shaped frames, Lost L-shaped 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 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 in the general comments.

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, and so on.

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 lacquers and varnishes.
- Reduce the pressure of the cutting tool to avoid splinters.
- When starting, cut slowly and build up pressure until you achieve a good cut.
- To cut patterned glass, lower the cutting speed.
- Use small quantities of **neutral** cutting oils, such as the oil produced by Aachener Chemische Werke (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 and SAFE+ safety backing film through the film side.
Please consult the following website to find the nearest office to you:
<http://www.bohle-group.com/shop/>.
- 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 below-mentioned cutting wheels can also be used to cut non-painted glass without a SAFE or 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	

The painted surface of Mirox 3G mirrors is smoother than standard painted surfaces (e.g. Mirox MNGE). This means that several machine settings may need to be adjusted to prevent chips or shells during cutting.

The following steps are therefore recommended:

- The piece to be cut must be placed in the middle of the pinch roller. Some electrical switches react differently to 3G paint than to standard paint types. The settings therefore occasionally need to be adjusted to ensure that the piece to be cut is positioned well in relation to the pinch roller/bar.
- The pinch bar or roller may need to be set higher to ensure that the mirror is cut through properly.
- Due to the fact that the painted side is smoother, conveyor belts sometimes have less grip on the cut-offs that need to be removed. The following steps may therefore be necessary:
 - Either reduce the speed of the conveyor system (after the pinch roller) to remove the cut-offs (gradually increasing to the maximum speed at which the cut-offs can be removed). However, the cut-offs must already have been removed before the pinch roller/bar has been lowered completely.
 - Or work with conveyor belts that have a rougher surface.

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 treating a flat joint with arrisded edges, avoid edges with an angle greater than 145°.
- Treatment on the lacquered 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 of SAFE or SAFE+ safety backing film.
- Wash processed products immediately, preferably with de-ionized water, and dry carefully, especially around the edges.
- Use spacers when stacking processed products.

7. LAMINATING

Mirox MNGE & 3G 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.

However, Mirox SAFE / SAFE+ is the perfect solution for your safety needs. Safety backed mirrors according to "EN12600 type B" have a similar breakage pattern to laminated glass (pieces of glass remain attached to plastic film without separating).

8. SANDBLASTING

Both Mirox MNGE and 3G may be partially sandblasted.

As the paint on Mirox 3G is harder than on an MNGE mirror, some adaptations are required:

- use aluminium oxide grit instead of sand
 - aluminium oxide can be reused several times
 - less dust during application
- different grain grades can be used: 100,120, 150,180 or 320 meshes with a pressure of 3 to 5 bars
- no need to invest in new equipment/machinery

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:

- Mirox MNGE mirrors can be cleaned only with clean water.
- The Mirox 3G mirror can be cleaned using modern cleaning products (see “Installation Guide” on www.yourglass.com).
- However, for both Mirox MNGE and 3G, ammonia-based or other abrasive products, such as anti-limescale products, 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.yourglass.com.