

The logo for AGC, consisting of the letters 'AGC' in a bold, blue, sans-serif font. The letter 'G' has a small red square on its upper right side.

LACOBEL MATELAC

INSTALLATION GUIDE

VERSION 1.0 – SEP 2019

This version of the guide replaces and cancels all previous versions.
Please check <http://agc-tas.com/> regularly for updates.

Your Dreams, Our Challenge

WARNING

Carefully read this manual before cutting and installing Lacobel & Matelac products.



Important Preliminary Instructions

Lacobel and Matelac are painted 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.

For safety applications, Lacobel and Matelac glass products are available with a safety backing film applied to the painted side of the glass.

All Lacobel and Matelac colours can be used in damp environments (kitchens, bathrooms, etc.) but should never be immersed in water. In such environments, the metallic colours (Grey Metal ref 9006, Aluminium Rich ref 9007, Taupe Metal ref 0627, Copper Metal ref 9115, Black Starlight ref 0337 and Brown Starlight ref 9015) require the use of a safety film.

The use of Lacobel and Matelac with backlighting is not recommended, as the product is not designed for this kind of application. Please contact your local AGC sales representative for an alternative product for such applications.

The thickness of the Lacobel or Matelac product must be defined on the basis of the size and shape of each panel. AGC recommends 5 mm thickness for wall cladding (panels > 1 m²). For very large panels, thicker glass may be required.

Do not fit glass onto walls that are not entirely clean, dry and pre-treated with a primer in case of porous surfaces. The glass has to be clean and dry and should not be immersed in water during handling or setting.

Ensure that the paint on the back of the glass has not been scratched during the cutting and assembly process.

For "light" colours (White Pure Ref 9003, White Soft Ref 9010, White Pearl Ref 1013, Red Luminous Ref 1586), AGC strictly recommends using transparent silicone and painting the complete wall/substrate in a uniform white colour.

Before installation, paint the wall in the same colour of the glass on the glass junctions to avoid colour differences that might be seen through the transparent joints.

Always use glue/silicone/tape brands recommended by AGC and follow exactly the instructions supplied by the adhesive manufacturer (particularly regarding the quantities of adhesive to be used per m²). The use of any other adhesive not validated by AGC is the sole responsibility of the user/customer. When bonding safety backed Lacobel and Matelac glass with silicone, it is mandatory to pre-treat the safety backing film with an activator. For gluing without activator, please contact your silicone supplier.

Care should be taken with the usage of adhesives on Matelac glass as stains made on the matt surface cannot be properly removed afterwards.

The use of safety gloves and appropriate personal protection is strongly recommended during all operations, handling and setting of the glass.

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1. INTRODUCTION

This guide sets out AGC’s recommended processing, cutting and setting methods when fitting Lacobel and Matelac glass.

Fitting painted glass is a delicate procedure. Correct installation is critical in ensuring:

- the safety of the end user - by preventing breakage;
- the quality of the glass - by preserving the paints;
- the correct appearance of the glass - by preventing shadows and colour variations caused by the surface to which the glass has been fitted.

Fitting large panels of Lacobel or Matelac glass is a job for professional glaziers, whereas smaller, tile formats can be fitted by tilers provided they follow the recommendations set out in this guide.

The content of this guide reflects our knowledge and experience at the time of publication. Customers and glass fitters can always contact AGC Glass Asia Pacific’s Technical Advisory Services (TAS) for further assistance if required. The glass fitter is entirely responsible for the final application, including the installation of the glass and the compatibility between the different materials used. AGC Glass Asia accepts liability for the product it supplies and for its general sales conditions.

2. LACOBEL AND MATELAC DECORATIVE GLASS

Lacobel and Matelac are two opaque float glass ranges intended exclusively for interior use. Their opaque quality is obtained by applying high-quality paint to the rear of the glass.

The difference between the two lies in their appearance: Lacobel is reflective (paint + float) while Matelac has a satin matt finish (paint/silvering + acid-etched float).

Highly prized by the furniture industry and interior designers, these glass ranges come in a vast array of colours. Used as wall covering, they provide an interesting alternative to traditional solutions such as wallpaper and paint.

Lacobel and Matelac products cannot be laminated or used in double glazing units, even on the inner side of the glazing unit.

The use of Lacobel and Matelac with backlighting is not recommended, as the product is not designed for this kind of application.

ORIENTATION OF THE GLASS SHEETS

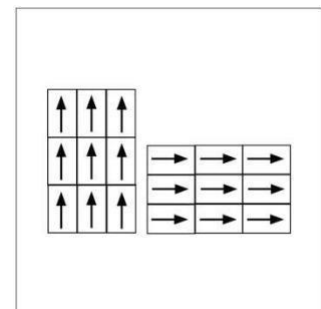
Most colours are applied isotropically. This means that the coating does not have a ‘direction’ or ‘orientation’. This presents two advantages when installing the glass. Firstly, since the entire sheet can be used, cutting can be organised very efficiently, thus minimising waste. Secondly, during the planning and installation phase no particular care must be taken to install the glass in a particular direction.

Some colours are an exception. Due to the special pigments used for some colours, they have a specific orientation. This must be taken into consideration during planning, processing and installation.

These colours are:

Lacobel: Grey Metal, Taupe Metal, Aluminium Rich, Copper Metal, Black Starlight, Brown Starlight

Matelac: Grey Metal, Taupe Metal



ORIENTATION OF GLASS SHEETS

3. SAFETY BACK FILM FOR LACOBEL AND MATELAC

Lacobel and Matelac glass products also exist in safety versions, with a safety film applied to the painted side of the glass. The safety film has a triple function:

- 1) If the glass breaks, the splinters stick to the film, thereby preventing injuries and damage.
- 2) It protects the paint from scratching.
- 3) In humid environments (such as kitchens and bathrooms), the metallic colours require the use of a safety film.

Lacobel / Matelac with safety film (supply source: AGC Europe) comply with EN12600 standard.
Lacobel with safety film (supply source: AGC Asia) comply with AS/NZS 2208 grade A standard.

When bonding Lacobel / Matelac with safety film in wall covering applications, silicone, surface activator and double-sided adhesive tape must be used. A table of recommended brands can be found in the appendix of this guide.

4. MATELAC SILVER

If you are fitting one of the four Matelac Silver glass products (Silver Clear, Silver Clearvision, Silver Grey or Silver Bronze) as a wall covering, please consult AGC's Mirox MNGE installation guide, which can be found on <http://agc-tas.com/>

5. INSTALLATION GUIDE FOR GLAZIERS AND TILERS

5.1 Preparing the walls (or any other surface)

Before fitting painted glass as a wall covering, AGC recommends checking the state of the walls (or other surface) to avoid any deterioration in the paint on the back of the glass and to facilitate the setting process.



5.1.1 To prevent deterioration of the glass paint

Apply the glass to a clean, dry surface: do not fit glass onto walls or any other surfaces that are not completely dry.

Pre-treat porous surfaces with a primer.

Ensure that the paint on the back of the glass has not been scratched during the assembly process.

Ensure that the glass is not wet or immersed in water during handling or setting.

When fitting glass as a kitchen splash back, lay skirting above the work surface near any heat source (i.e. between the heat source – cooker, etc. – and the glass).

5.1.2 For easier installation

Smooth out any uneven wall or background surfaces. A smooth surface will ensure optimum adherence of the glass.

5.2 Damp environments

All Lacobel and Matelac colours can be used in damp environments (kitchens, bathrooms, etc.) but should never be immersed in water. In such environments, the metallic colours (Grey Metal ref 9006, Aluminium Rich ref 9007, Taupe Metal ref 0627, Copper Metal ref 9115, Starlight Brown ref 9015 and Black Starlight ref 0337) require the use of a safety film.

The glass must be protected to prevent water from penetrating behind it: see list of recommended sealing brands on pages 11 and 12. Ensure that the damp area is properly ventilated to prevent water accumulation on the glass.

5.3. Special cuts

5.3.1 General recommendations

Special cuts are sometimes required to avoid 'obstacles' on walls such as electrical sockets and water/air outlet pipes.

Large glass panels: ask your glazier to do the necessary cutting in the workshop.

Small tile formats: the cutting can be done by your tiler. This chapter describes the different types of cut-outs that are possible and the tools required.

The use of safety gloves and appropriate footwear is strongly recommended.

Measuring

Regardless of the format of the glass, whether large panels or tile-size, precise measurements must be taken. Near pipes and sockets, the diameter of the cut glass should be 1cm larger than the original measurement.

Recommended thickness

The thickness of the Lacobel or Matelac product must be defined on the basis of the size and shape of each panel. AGC recommends 5mm thickness for wall cladding (panel > 1 m²). For very large panels, thicker glass may be required.

Tools

Before starting, read the manufacturer's instructions on how to use the different cutting tools.
Work on a stable cutting table with a felt cutting mat.
Ensure that the cutting table will not scratch the glass.
To prevent injuries, lightly sand the edges of the cut glass.
To prevent the glass from breaking, do not press too heavily on it when fitting around holes.

5.3.2 Cutting Advice

When starting, cut slowly and build up pressure until you achieve a good cut.

Use ACECUT 5503 cutting oil or equivalent.

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.

5.4 Fitting glass onto the wall

There are two main ways of fitting Mirox MNGE mirrors:

- The bonding method, using:
 - silicone
 - adhesive tape
- The mechanical method, using screws, metal clips or fixing the glass directly into a frame.



Special note for splashbacks

Non-tempered glass can break if there is a temperature difference of 30°C or more on the same sheet of glass. For instance, a hot cooking vessel that touches the glass could cause it to break.

If the hob is positioned near the splash back, the best and safest way to avoid thermal breakage is to position another piece of material right behind the hob, up to the same height as the heat source / cooking ware (approximately 10 to 15cm), so as to prevent the heat source / cooking ware from touching the Lacobel splash-back. This additional piece is often made of the same material used for the worktop. Another possible solution is to place a small piece of transparent tempered glass in front of the Lacobel.

5.4.1 Bonding method

General recommendations

If you opt for the bonding method, you should use the adhesive best-suited to your type of glass (with or without SAFE and SAFE+ backing film) and the level of safety required due to the size of the glass.

Here are a few recommendations:

Type of glass	Type of adhesive	Appropriate adhesive	Safety solution
Lacobel or Matelac	Tile adhesive	YES (*)	YES
	Silicone	YES (*)	NO
	Adhesive tape	YES	NO
Lacobel or Matelac SAFE or SAFE+	Tile adhesive	NO	NO
	Silicone	YES	YES
	Adhesive tape	YES	YES

(*) Exceptions for some colours – see specific chapter.

Comments

Adhesive tapes can also be used for bonding Lacobel or Matelac with safety film glass products. However, unlike with tile adhesives and silicones, it is not possible to adjust the glass when setting.

5.4.2 Silicone

Silicone can be used with both Lacobel and Matelac, including the safety film versions.

RECOMMENDATIONS FOR USE

Always refer to the adhesive manufacturer's instructions about compatibility with the substrate. When using silicone on a SAFE or SAFE+ version, AGC strictly recommends also using double-sided adhesive tape to maintain the glass during the drying time of the silicone (see chapter 5.4.4 for adhesive tape selection).

Before starting, read the recommendations for use supplied by the silicone manufacturer (particularly regarding the quantities of silicone to be used per m²).

AGC recommends painting the entire wall in a **uniform white colour** to ensure a uniform glass appearance after installation.

When mounting Lacobel or Matelac, always apply double-sided tape and glue or silicone in vertical strips while ensuring that air can circulate between the back of the painted glass and the substrate.

For some colours, especially White Pure ref 9003, White Soft ref 9010, White Pearl ref 1013, and Red Luminous ref 1586, AGC strictly recommends using **transparent silicones**.

When fitting lighter colours using silicone and double-sided tape, it is important to ensure that light cannot penetrate through the sides of the glass as this could cause shadows from the adhesive strips to show through on the front.

Care should be taken with the use of silicone on Matelac glass as stains made on the matt surface cannot be properly removed afterwards.

If the above-mentioned recommendations for use are followed, any traces of silicone visible through the glass will disappear as the silicone dries. Please refer to the drying time of the type of silicone used (this varies from one brand to another).

Silicone brands* compatible with standard Lacobel and Matelac glass⁽¹⁾

Type	Brand	Manufacturer
Oxime	Parasilico AM 85-1, transparent	DL Chemicals
Oxime	Silirub 2, transparent	Soudal
Alcoxy	DC 817, white	Dow Corning

*These brands of adhesive can be used with all standard Lacobel and Matelac colours except with: Green Sage ref 8715, Red Terracotta ref 8815, Grey Metal ref 9006, Copper Metal ref 9115, Aluminium Rich ref 9007, Black Starlight ref 0337, Brown Starlight ref 9015 and Taupe Metal ref 0627. If metallic colours need to be glued with silicone, a safety film should be used.

When bonding safety backed Lacobel and Matelac glass with silicone, the safety backing film must be pre-treated with a surface activator and recommended one must be used. For gluing without activator, please contact your silicone supplier.

Silicone brands* compatible with Lacobel and Matelac with safety film

Silicone		Activator		
		Manufacturer		
Alcoxy	Dow Corning	DC817, white	Dow Corning	cleaner R40 + primer 1200 OS or primer C

5.4.3 Tile adhesive

This type of adhesive can be used with Lacobel, but not with the safety back versions of these glass products. Tile adhesive exists as both cement glue and dispersion glue. Cement glue must be used in places where fire regulations are in force. Always refer to the adhesive manufacturer’s instructions about compatibility with the substrate.

RECOMMENDATIONS FOR USE

Tile adhesive must be applied uniformly to the surface to be covered and on the back of the glass (particularly around the edges). Before starting, read the recommendations for use supplied by the tile adhesive manufacturer (particularly regarding the quantities of glue to be used per m²). Care should be taken with the usage of tile adhesives on Matelac glass as stains made on the matt surface cannot be properly removed afterwards.

Tile adhesive brands* compatible with standard Lacobel & Matelac glass⁽¹⁾

Type	Brand	Manufacturer
Dispersion, colour = white	Ultramastic III	Mapei
Dispersion, colour = light grey	Cermifix HP	Desvres

*These brands of adhesive can be used with all standard Lacobel/Matelac colours, except: Grey Metal ref 9006, Aluminium Rich ref 9007, Black Starlight ref 0337, Brown Starlight ref 9015, Taupe Metal ref 0627, Copper Metal ref 0867, Blue Shadow ref 7000, Green Sage ref 8715, Brown Natural ref 7013 and Anthracite Authentic ref 7016.



(1) Information given in this guide about any other sealant or cement joint is purely indicative.

5.4.4 Adhesive tape

Standard Lacobel and Matelac glass products can be bonded using adhesive tape. In such cases, AGC recommends using the safety back version for safety reasons, especially when the glass is used as a wall covering.

RECOMMENDATIONS FOR USE

- AGC recommends painting the entire wall in a uniform white colour to ensure a uniform glass appearance after installation.
- When fitting lighter colours (especially White Pure ref 9003, White Soft ref 9010, White Pearl ref 1013 and Red Luminous ref 1586) using adhesive strips, it is important to ensure that light cannot penetrate through the sides of the glass as this could cause shadows from the adhesive strips to show up on the front.
- Always use a large quantity of adhesive and follow the manufacturer's instructions.

The amount of adhesive tape required will depend on the type of tape being used and the weight of the Lacobel or Matelac. The table below shows the weight per m² for different thicknesses of glass:

Thickness of Lacobel or Matelac glass	Weight of glass/m ²
3mm	7.5kg
4mm	10kg
5mm	12.5kg
6mm	15kg



AGC recommends using at least ten 10mm x 100mm strips per 10kg of painted glass and applying several smaller pieces rather than one single length (as indicated on the right in the above illustration).

5.4.5 Joints

Sealing the joints prevents water from penetrating to the rear of the glass and is absolutely vital in damp environments.

Joints should be 3mm thick.

Recommended brands for tile glass formats are:

- 706WD (Eurocol)
- Ultracolor Plus (Mapei)

For large glass panels, the recommended brands are the same as the silicones recommended for bonding.

5.4.6 Mechanical fitting

If using a frame to fit your glass, you should:

- use blocks and spacers to prevent contact with the frame;
- avoid contact between the Lacobel/Matelac and hard and/or brittle substances such as metals and porcelain.

This type of fitting is recommended for ceilings (for safety back versions).

Using metal clips and/or screws

If using metal clips and/or screws to fit your glass, you should:

- insert a foam spacer between the clip and the glass;
- avoid contact between the Lacobel/Matelac and hard and/or brittle substances such as metals and porcelain.

6.1 Recommendations: before fitting the glass onto the wall (or any other surface)

Topic	Tips
Preparing the walls	Dry, clean surface
	Pre-treat porous surfaces with a primer
	Even out walls
	Ensure the substrate has a uniform (white) colour to ensure uniform appearance after installation
	Do not fit glass to a damp surface
Damp environment (kitchen, bathroom)	Joints must be sealed to prevent water from penetrating behind the glass
	Ventilate the area regularly to prevent water from accumulating on glass
Cutting near pipes, plugs, etc.	Take precise measurements and make diameter 1 cm larger than original measurement
	For large glass panels and glass with safety back version: have special cuts performed by a professional glazier
	For small tile formats: can be done by glazier or tiller
	Before starting, read manufacturer's instructions for using the different tools
	Work on a clean (felt-covered) cutting table
	Execute edge-working (with sand paper or by using specific edge-working tool)
Recommended thickness	Depending on the size and shape of the glass, 5 or 6mm is recommended for wall covering. For very large panels, thicker glass may be required.

6.2 Recommendations: when fitting the glass onto the wall (or any other surface)

Topic	Tips
Water resistance	All Lacobel colours can be used in wet/humid areas (bathrooms and kitchens) but cannot be immersed in water.
	The metallic colours Grey Metal ref 9006, Copper Metal ref 9115, Aluminium Rich ref 9007, Black Starlight ref 0337, Brown Starlight ref 9015 and Taupe Metal ref 0627 must be used with a SAFE or SAFE+ backing film when fitted to any wall and when used in wet/humid areas. For bonding, use silicones and/or tapes that are compatible with the safety film (see summary table of recommended brands).
	Lacobel must be protected from any water infiltrating at the back of the glass (use silicones for joints).
All adhesives	Before starting, read the instructions supplied by the adhesive manufacturers
	Respect the brand, type and colour of adhesive advised.
Tile adhesive	Do not use with safety film glass version.
	Must be applied uniformly to the surface to be covered and on the back of the glass
Silicones	Recommended with activator for safety back glass version.
	Respect the brand, type and colour of adhesive advised, respect silicone manufacturer's recommendations.
	Transparent silicones are recommended for certain light colours
Adhesive tape	Can be used for fitting all Lacobel and Matelac products including Safety back versions.
Lacobel and Matelac safety back version	For bonding, it is preferable to use silicone (or in some cases adhesive tape)
	When bonding with silicone, back of the plastic film must be treated by an activator. For gluing without activator, please contact your silicone supplier.
Fitting using a frame or clip	Insert non-metal spacers between the frame or clip and the glass.
	Avoid contact between the glass and hard substances (porcelain, metals, etc.)
Fitting using screws	Possible, but should be avoided
Joints	Joint sealing recommended to prevent water penetration

UV resistance: the colours are fixed during the production process (no discolouring possible)

Appendix 6.1 Glue Table

Wall adhesive	type Material	brands (R) = recommendation (S) = suit	Color	Suppliers	Lacobel *	Matelac *	Lacobel / Matelac Safetyback	Activators behind Safetyback
Wall adhesive	Dispersion	Ultramastic III (S)	White	Mapei	YES (*)	NO	NO	/
	Dispersion	Cermifix HP (S)	- gray bright	Desvres	YES (*)	NO	NO	/
silicon	Oxime	Parasilico AM 85-1 (S)	Transparent	DL Chemicals	YES(**)	YES(**)	NO	Parasilico Cleaner + Detaprimer 435.10 (DL Chemicals)
	Oxime	Silirub 2 (S)	Transparent	SOULDAL	YES (**)	YES (**)	NO	/
	Alcoxy	DC817 (S)	White	Dow Corning	YES (**)	YES (**)	YES	R40 cleaner + primer 1200 OS or primer C (Dow Corning)
Adhesive Tape	rubber	MACmount M 1702 (S)	White	MACTac	YES	YES	YES	/

(*) With the exception of some colours: Taupe Metal 0627, Brown Natural 7013, Anthracite Authentic 7016, Grey Metal 9006, Aluminium Rich 9007, Green Sage 8715, Copper Metal 9115 and Brown Starlight 9015

(**) With the exception of some colours: Black Starlight 0337, Taupe Metal 0627, Grey Metal 9006, Aluminium Rich 9007, Green Sage 8715 and Red Terracotta 8815

General remarks

Always use glue/silicone/tape brands recommended by AGC and follow exactly the instructions supplied by the adhesive manufacturer (particularly regarding the quantities of adhesive to be used per m²). The use of any other adhesive not validated by AGC is the sole responsibility of the user/customer.

For 'light' colours (White Pure Ref 9003, White Soft Ref 9010, White Pearl Ref 1013, Red Luminous Ref 1586), AGC recommends using transparent silicone and painting the entire wall/substrate in a uniform white colour.