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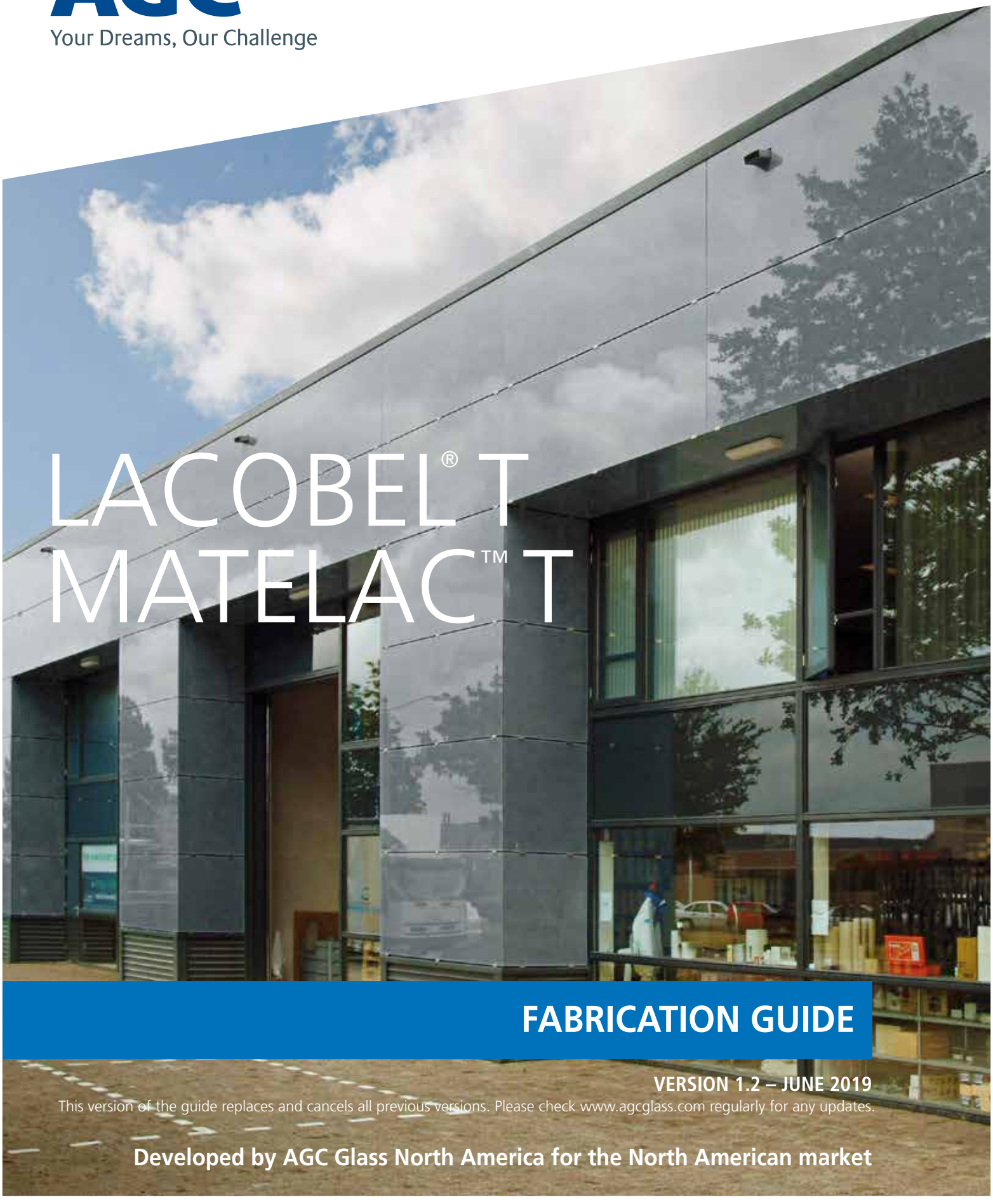


LACOBEL® T
MATELAC™ T

FABRICATION GUIDE

VERSION 1.2 – JUNE 2019

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

Developed by AGC Glass North America for the North American market

WARNING

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

IMPORTANT PRELIMINARY INSTRUCTIONS

AGC Glass North America requires each glass fabricator who wants to heat strengthen or temper Lacobel T or Matelac T products contact their AGC sales representative to set up a qualification trial with AGC Technical Services. This will make the fabricating procedure smooth and easy for the customer and will limit possible risks of claims in the future. If the trial is successful, the fabricator will receive an AGC certificate showing that they are an AGC Qualified Fabricator of Lacobel T and Matelac T.

Product – Lacobel T and Matelac T must be either thermally tempered in compliance with ANSI Z97.1 or heat strengthened in compliance with ASTM C1048.

Product – Process Lacobel T and Matelac T within 24 months of delivery.

Storage and Handling – Store and handle Lacobel T and Matelac T with care to avoid damaging its paint or staining the etched side of Matelac T. Clean off any kind of potential pollution coming in contact with the painted side and quickly and carefully dry off water and/or humidity. A protection foil is applied to the paint side of the glass to protect it during transport, storage, and fabricating. This foil must be removed before tempering.

Cutting – Cut Lacobel T and Matelac T on a clean cutting table, painted side down. Use compatible volatile cutting oil and wipe it off after cutting. Perform waterjet cutting on the painted side.

Edge processing– **Single edger** - Painted side facing the operator, use clean pads. Crossed belts: painted side face up, use sprinklers.

Edge processing - **Double edger** - Painted side face-up, use clean belts. CNC: painted side face up or facing the operator.

Washing – When exposed to extended periods of fabrication (> 15 minutes) using water such as drilling or notching, Lacobel T and Matelac T absorbs water and cannot be tempered until the paint fully dries. We recommend washing immediately after drilling/notching with clean water and then either:

1. Drying the paint with compressed air. Then stack the glass so the paint isn't touching another piece of glass, such as in a harp rack or stacked individually on A-racks with separators. The glass then needs to sit 12 hours in a warm, dry area to ensure the **paint completely dries**.

OR

2. Running the glass through a drying oven, such as an oven used to dry the paint on silk screened glass. It can then be tempered. Do not stack wet glass sheets between edge processing and washing.

Heat treatment – Use **ONLY** a convection furnace. **A furnace with at least top convection is required.** Heat treat the glass within 5 days after edge processing and washing. Painted side face up.

- Furnace settings with top convection only: 1274 °F (690 °C) top and 1310 °F (710 °C) bottom.
- Furnace settings with top and bottom convection: 1274 °F (690 °C) top and 1292 °F (700 °C) bottom. - Convection: 35% of the maximum pressure top and appropriate bottom (if any), for the first 100 seconds of heating time.
- A reasonable starting point for cycle time is 45 seconds per mm of thickness. Individual furnaces are different and the finite settings will need to be adjusted based on a furnace's performance.

Enamel quality – Test the quality of the enamel after heat treatment by touching the painted side with a wet finger; no wet stain may be visible from the glass side.

Further information – Please visit www.agcglass.com or to contact AGC's Technical Services.

LACOBEL® T & MATELAC™ T

FABRICATION GUIDE

Contents

I. PRODUCT: LACOBEL T AND MATELAC T

Lacobel T and Matelac T are products intended for interior and exterior applications.

Lacobel T and Matelac T are two opaque float glass ranges that are meant to be tempered. Their opaque quality is obtained by applying high-quality temperable paint to the reverse side of the glass. The difference between the two lies in their appearance: Lacobel T is glossy (temperable paint + float) while Matelac T has a satin matte finish (temperable paint + acid-etched float).

They are to be used in glass side reflection, never in transmission applications. Hence, Lacobel T and Matelac T are not suitable for applications where the glass is backlit (neither naturally, nor artificially). Please contact your local AGC representative for an alternative product for such applications.

Lacobel T and Matelac T **MUST BE heat treated** (either heat strengthened in compliance with ASTM C1048 or thermally tempered in compliance with ANSI Z97.1).

This document gives recommendations on how to maximize the quality of the product.

The content of this guide reflects our knowledge and experience at the time of publication. Customers and glass installers can always contact AGC's Technical Services for further assistance if required. The glass installer is entirely responsible for the final application, including the installation of the glass and the compatibility between the different materials used.

II. UNLOADING AND STORAGE

1. Unloading

Upon delivery, Lacobel T and Matelac T glass is provided in these stock sizes:

- 88-37/64" x 126-3/8"
- 100-25/64" x 126-3/8"
- Other sizes upon request

Paper or powder interlayer can be used to separate the glass.

During the operations of unloading and internal transport, everything coming in contact with the paint side, has to be clean. If necessary, a protective material has to be used between the paint and the handling equipment. For the Matelac T, special attention should also be given to the acid-etched face of the product as it is very stain sensitive.

The packs of glass must be inspected upon arrival. AGC shall accept no liability for faults arising after delivery or during handling, fabricating, or installation of the finished product in the building if this procedure is not followed:

- The case must be positioned on a perfectly level ground
- Use the appropriate handling equipment
- The handling equipment must be perfectly centered
- Avoid damaging the paint and the protective packaging while handling
- The glass must be stored on appropriate racks
- All recommendations given in this Fabricating Guide shall be strictly followed

General comments:

- Clamps, slings, lifting beams, and other handling 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 equipment.
- Personnel must have received the necessary training.

2. Storage of the packs

Storing packs correctly reduces the risk of chemical or mechanical damage to the glass.

As a general rule, care should be taken to avoid major fluctuations in temperature and humidity that may cause condensation on the glass because this may impact the quality of the paint. Such fluctuations generally occur near loading and unloading areas. No water should come into contact with the sheets of glass. To prevent any risks, a protection foil is applied by AGC on the paint side of the glass. This foil protects the paint while the product is being transported, stocked, and processed. The foil must be removed before tempering.

Transport racks are designed for short transports and not for storage. Consequently, the glass must be stored on racks with clean spacers between packs ensuring that all packs of the same size are stored together.

When opening packs, make sure the painted surface of the final sheet is not exposed to pollution and humidity for a prolonged period.

The glass should be used within 24 months of delivery.

III. FABRICATING

AGC Glass North America requires each glass fabricator who wants to heat strengthen or temper Lacobel T or Matelac T products contact their AGC sales representative to set up a qualification trial with AGC Technical Services. This will make the fabricating procedure smooth and easy for the customer and will limit possible risks of claims in the future. If the trial is successful, the fabricator will receive an AGC certificate showing that they are an AGC Qualified Fabricator of Lacobel T and Matelac T.

1. Safety

At each stage of the fabricating procedure, the personnel responsible for handling the glass must have the adequate equipment: safety shoes, clean safety gloves (preferably new gloves), safety glasses, etc.

2. General

Personnel must wear perfectly clean safety gloves at all stages of the fabricating procedure to avoid any pollution on the glass and/or the enamel paint.

3. Handling

The sheets of glass should be handled using suction-lifting gear or an automatic stacking machine. The suction pads should ideally be attached to the glass side. For Matelac T, as the glass side is acid-etched and thus sensitive to pollution, the suction pads must be perfectly clean and covered with protective suction pad covers.

If the suction lifting gear is attached to the painted side during handling, the suction pads must be perfectly clean and covered with protective suction pad covers. Care should be taken to ensure the suction pads do not slip on the paint at this stage.

If self-adhesive stickers are used during the process to identify the glass during production, the adhesive side of the sticker shall never be in contact with the paint side.

4. Cutting

4.1 General precautions

The following general precautions must be taken during cutting:

- The cutting oil used must be compatible with the painted surface, sufficiently volatile and water soluble (e.g. Acecut 5503). As little oil as possible should be used in order to avoid heavy oil contamination of the painted surface.
- The cutting oil should be wiped off the glass side before unloading the cutting table.
- The glass must be placed with the painted side down to ensure a correct cutting procedure (the glass cannot be cut from the painted side). The table must be clean and free of glass shards or any other abrasive substances. If the table has rollers, they must be pre-checked. Rollers must be perfectly synchronized to avoid scuffing the painted surface.
- Regularly cleaning the conveyor belts may be necessary to prevent marks. Any such mark would damage the paint side (but would not be visible on the glass side).
- The table and any other equipment likely to come into contact with the paint must be pre-checked. If stains are not removed by the washing machine, checks must be carried out to ensure they fully disappear at the heat treatment (stains embedded deep in the paint will not disappear).

4.2 Cutting through the protective film

AGC recommends cutting the non-painted side.

For those customers who wish to cut through the paint and film please contact AGC Technical Services.

4.3 Storage after cutting

Cork or foam static cling or non-residue adhesive tabs can be placed around the edges of the glass. The adhesive side should be attached to the glass side. The same also applies to packs containing differently sized sheets of glass.

The Lacobel T and Matelac T paint **must not** be edge deleted along the perimeter of the glass.

Heat treat the glass within maximum five days after the edge processing and on-line washing.

5. Pre-fabricating

Lacobel T and Matelac T are designed to undergo a heat treatment process (either heat strengthening or thermally tempered). Before either takes place, the glass must be edge processed.

5.1 Handling of the glass

Personnel responsible for handling and shaping the edges of the glass must wear **clean safety gloves.**

5.2 Precautions

- The glass must be kept moist for the entire edging process to prevent it from drying naturally.
- The glass must be washed and **dried within 15 minutes after edge processing**.
- **The glass sheets shall never be stacked wet on a rack, between edge processing and washing.**

5.3 Processing – Edges, Drilling, and Cut-outs

There are various types of drilling and edge-processing machines on the market:

- Lacobel T and Matelac T can be drilled with diamond tools or by waterjet. In any case the painted surface is recommended to face the operator (vertical processing) or upwards (horizontal processing).
- **Vertical single-edging** systems can be used, but may cause significant and irreversible contamination on the painted side of the glazing, as the glass is held in place by rubber caterpillar pads. To limit contamination, the pads facing the paint should be kept spotlessly clean (no oil, grease or dust). We recommend using pressure pads with a grey color, the rubber of these pads does NOT contain "carbon black" fillers that could cause irreversible contamination of the painted side. The painted surface is facing the **operator**.
- **Crossed belt** systems can be used provided the **painted surface** is facing **upwards**. Use water sprinklers during the edging.
- **Horizontal double-edging** systems can be used provided the glass is supported by clean conveyor belts. Again, the **painted surface** should face **upwards**. Some of the water sprinklers should be set so that they clear the painted surface of any impurities (stains, glass dust, etc.) just before the glass comes into contact with the upper conveyor belts.
- Numerical control systems (CNCs) can be used provided the painted surface is facing **upwards**.

The glass should be thoroughly washed and dried within 15 minutes after processing. When exposed to extended periods of fabrication (> 15 minutes) using water such as drilling or notching, Lacobel T and Matelac T absorb water and cannot be tempered until the **paint fully dries**. We recommend washing immediately after drilling/notching with clean water and then either:

1. Drying the paint with compressed air. Then stack the glass so the paint isn't touching another piece of glass, such as in a harp rack or stacked individually on A-racks with separators. The glass then needs to sit 12 hours in a warm, dry area to ensure the paint completely dries.

OR

2. Running the glass through a drying oven, such as an oven used to dry the paint on silk screened glass. It can then be tempered.

The glass sheets shall never be stacked wet on a rack between processing and washing.

6. Washing machine

This stage involves washing, rinsing, and drying the glass.

When using **horizontal washing machines**, the **painted surface** shall be facing **upwards**.

In case a **vertical washing machine** is used, the **painted surface** should be **facing the operator**.

The glass should be washed using **clean, demineralized water** with a pH between 6 and 8 and conductivity < 500 µS/cm. No hard substances (such as limestone, which might stiffen the brushes), acidic agents or detergents should be present in washing and rinsing water.

AGC recommends using 'soft' brushes (with bristles ≤ 0.011" in diameter maximum). Ensure the water supply is sufficient and even so that the painted surface is never dry when brushed.

The glass must be washed on its entire surface and dried within 15 minutes after edge processing.

The glass should be completely dry when it leaves the machine.

Water droplets **must be** wiped off with a piece of tissue.

After washing, cork foam static cling or non-residue adhesive tabs can be placed **on the glass side**, around the edges of each glazing to prevent contact between the glass and the paint.

Quality control

Two or three high-intensity lights should be installed at the washing machine exit to illuminate the painted side of the glass properly, enabling personnel to detect and quickly remedy any mechanical damage to the paint (scratches, flaking, or contamination of any kind).

When the glass is placed vertically against the rack the glass side should be checked meticulously for paint residues, which may contaminate the rollers in the tempering furnace. Such impurities can be removed easily by using a sharp object, e.g. a razor blade, taking care not to scratch the glass side.

7. Thermal tempering and heat strengthening

AGC Glass North America requires each glass fabricator who wants to heat strengthen or temper Lacobel T or Matelac T products contact their AGC sales representative to set up a qualification trial with AGC Technical Services. This will make the fabricating procedure smooth and easy for the customer and will limit possible risks of claims in the future. If the trial is successful, the fabricator will receive an AGC certificate showing that they are an AGC Qualified Fabricator of Lacobel T and Matelac T.

7.1 Introduction

Lacobel T and Matelac T colors change during the heat treatment process. The true color of Lacobel T or Matelac T is determined only after the heat treatment.

The thermal parameters (temperatures, convection settings and heating time) shall be strictly the same for thermally tempered as for heat-strengthened Lacobel T / Matelac T.

7.2 General information on furnace type

When a clear glass enters a tempering furnace, it changes shape at the start of the heating cycle. The change is more pronounced with painted glass because of the difference in absorption rates between the two surfaces, causing one side to heat up more quickly than the other.

In the case of Lacobel T or Matelac T, the upper (painted) surface is heated by radiation. The energy absorbed by the upper layer depends on its color; black is more absorbent than grey or white.

Depending on the color of the paint, the temperature of the upper and lower surfaces can be balanced out by using convection.

Use the convection adequately to:

- Keep the glass flat during the heating cycle and avoid inconsistent heating of the glass
- Significantly reduce heating time and hence boost the productivity of the plant
- Optimize the quality of the enamel (color homogeneity and fusing)

Therefore, Lacobel T / Matelac T shall be heat treated in furnaces fitted with at least an upper convection system. Bottom convection is not nescessary, but can help to keep the glass flat inside the furnace.

The paint on the glass contains organic substances which usually burn off at the temperatures reached in a tempering furnace. The combustion process consumes oxygen and produces a flame

(the same occurs with certain enamels used in architectural and automotive glass). In the case of Lacobel T and Matelac T, substances tend to start burning off around 15 seconds after the glass has entered the furnace and can continue doing so for 100 seconds. The lack of oxygen in the painted surface (due to the flame) may cause a differential oxidation in the enamel, in turn causing an inconsistent final color on the reverse side (i.e. the painted side) of the product. To prevent this from happening, the upper surface of the product should also be convection heated during combustion. This will provide extra oxygen, thereby significantly speeding up the combustion process, homogenizing the color of the product and optimizing the enamel quality.

7.3 Recommendations

The following recommendations apply:

- Execute the heat treatment of Lacobel T or Matelac T within 5 days of edge processing, provided the glass is never directly exposed to water.
- **The painted surface must face upwards during heat treatment.**
- Personnel in charge of handling the glass must wear perfectly **clean gloves**. Large sheets of glass must be handled using suction lifting equipment; suction pads must be covered with protective suction pad covers.
- As the acid-etched side of the Matelac T is very dirt sensitive, special attention should be given to furnace rollers cleanliness.
- Just before loading the glass onto the entry conveyor of the furnace, the unpainted side of the glass should be checked meticulously for paint residues, which could contaminate the rollers in the tempering furnace. Any such impurities can be removed easily using a sharp object, e.g. a razor blade, taking care not to scratch the glass side, particularly on the etched side of Matelac T.

7.4 Furnace settings for the heat treatment

Since all furnaces enable users to regulate the heating and cooling process, the following recommendations should be considered as general guidelines:

The furnace settings should depend on:

- The product being heat treated:
  a. top/bottom absorption ratio
  b. glass thickness
  c. glass size/furnace size
- The furnace type:
  a. power density
  b. top convection or top and bottom convection
- Loading rate
- Heating geometry (the relative position of the heating elements/thermocouples/glass)

In practice, panes of 30" X 42" should be tested first.

Temperature

Furnace with top convection only: 1274 °F (690 °C) top and 1310 °F (710 °C) bottom.

Furnace with top and bottom convection: 1274 °F (690 °C) top and 1292 °F (700 °C) bottom.

Heating time

The cycle time should be adjusted:

- To prevent breakage during quenching
- To ensure the optical quality and break pattern of the glass
- To optimize the fusing quality of the enamel
- Start with 45 seconds per mm of thickness

The heat absorption of the glass may change depending on the paint color.

If necessary, decrease the heating time in order to obtain the right optical distortion and the correct fusing of the enamel.

IMPORTANT NOTE:
Once production is launched the furnace temperature will drop due to a lack of heat recovery. This can also lead to a drop in the glass temperature and may affect the quality of the tempered glass.

Some furnaces are more sensitive to this condition than others.

To offset this temperature drop, the heating time must be increased in order to maintain the right glass temperature and quality (see the Quality Control section below).

Convection

The convection profile should be adapted to ensure the glass remains flat from the earliest possible stage to the end of the heating process.

For all colors and thicknesses:

- Furnaces with top convection only:
  – Set upper convection pressure to 35% of the maximum pressure for the first 100 seconds of heating time
- Furnaces with top and bottom convection:
  – Set upper convection pressure to 35% of the maximum pressure for the first 100 seconds of heating time
  – The lower pressure can be set in order to keep the glass flat inside the oven

Quench

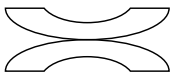
Quench should be set to ensure the glass is flat on exit (balance of upper/lower air) and that the break pattern meets requirements.

By default, **use the same quench settings as for the glass substrate without paint**.

Remarks:

The air balance of the quench shall be adjusted in the same way as for clear float.

- If the tempered glass is concave, increase upper pressure
- If the tempered glass is convex, decrease upper pressure



Quality control of the enamelled side

When the Lacobel T or Matelac T is coming out of the quench, it is mandatory to check the quality of the enamel (correct "fusing" of the enamel).

- A simple first test is to touch the enameled side with a wet finger. A wet stain must not be visible from the glass side.
- Another test can be performed to check the color. Inadequate heating can lead to color inconsistencies:
  – Place a sheet of glass on a rack with the **glass side facing you.**
  – Superimpose a second sheet of glass on the first one and move it so that you can compare the center of the first sheet with the edge of the second sheet. No substantial color difference should be observable.

7.5 Unloading

In general, once heat treated, Lacobel T and Matelac T can be handled and stored like enameled glass.

- If the glass is unloaded manually, personnel must wear **clean gloves.**
- Large and heavy sheets of glass should be handled using suction lifting equipment.
- Given that heat-treated glass is never perfectly flat, cork or foam static cling or non-residue adhesive tabs can be placed around the edges of each pane of glass to prevent contact between the glass and painted surfaces. Dry paper with a neutral pH can also be placed between the sheets of glass.

7.6 Heat soak test

The risk of spontaneous breakage due to nickel sulfide inclusions is inherent to thermally tempered safety glass. The presence of such inclusions can in no way be considered as a fault in the glass. In order to eliminate the risk of spontaneous breakage, an additional heat soak test can be carried out in accordance with standard EN 14179-1.

7.7 Standards

After heat treatment, Lacobel T and Matelac T should be subjected to the following checks:

- Heat-strengthened glass must comply with ASTM C1048
- Thermally tempered safety glass must comply with ANSI Z97.1
- Where performed, heat soak tests (HST) must comply with EN 14179-1

7.8 Packaging

If annealed cut sizes of Lacobel T or Matelac T are to be delivered to another factory in cut sizes, the following packaging recommendations should be implemented:

- A 0.04" polyethylene foam spacer should be placed on the glass side, between each sheet. Dry paper with a neutral pH can also be placed between the sheets of glass.
- Ensure that the glass is dry before packaging.
- The glass block shall be packed in a water-tight polyethylene envelope with desiccant bags inside.
- Care must be taken to ensure that the pack is properly attached to the rack so that the sheets do not rub against one another.

If heat-treated Lacobel T or Matelac T is to be delivered to another factory in cut sizes, the following packaging recommendations should be implemented:

- A 0.04" polyethylene foam spacer should be placed on the glass side, between each sheet; dry paper with a neutral pH can also be placed between the sheets of glass
- Care must be taken to ensure that the pack is properly attached to the rack so that the sheets do not rub against one another

8. Bending

In all cases the painted side of the glass must face upwards.

8.1 Heat-treated curved glass – oscillating furnaces

Same recommendations as for flat tempering.

8.2 Heat-treated curved glass – static furnaces (with bending molds)

Same settings as for clear float, same thickness.

Top convection is recommended for the above-mentioned reasons.

9. Sandblasting

Lacobel T and Matelac T can be sandblasted:

	Lacobel T	Matelac T	Heat Treatment
Glass Side	YES	NO	Before or After
Painted Side	YES	YES	Before

10. Laminating

Lacobel T and Matelac T can be laminated with EVA. With PVB, different grades were tested and only the high adhesion grade BGR20 from Trosifol gave acceptable results in respect to adhesion.

- Lacobel T: on the glass side (no restriction on PVB in that case) and/or enamel side, only after being thermally tempered first
- Matelac T: on the enamel side, only after being thermally tempered first

The glass sheets must be thoroughly washed and dried to prevent any trace of drops on the glass, and so that both sides are free of any residue (oil, fingerprints, etc.) and particles (grains of sand, pieces of glass, iron oxides, etc.).

Lacobel T and Matelac T cannot be laminated before thermal tempering.

For more detailed information please contact the AGC Technical Service.

11. Silkscreen printing

Lacobel T and Matelac T sheets can be silkscreen printed, but only after being thermally tempered. Below are several recommendations to comply with during this process:

- Check that the settings of the oven are correct for this type of glass and ink.
- The ink used must be chemically compatible with thermally tempered Lacobel T and Matelac T glass.
- Before screen printing, the thermally tempered sheets must be thoroughly washed and dried so that both sides of the glass are free of any residue (oil, fingerprints, marks of quality labels, etc.) and particles (grains of sand, pieces of glass, iron oxides, etc.).
- When the fabricator wishes to perform full surface silkscreen printing on the paint side, using an enamel ink, the painted surface of the already tempered glass **MUST face upwards** during this second heat treatment.

12. Facade applications

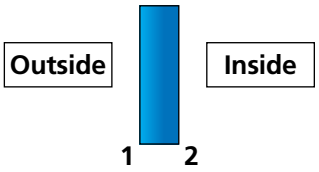
Lacobel T and Matelac T can be used in building applications with observation only in reflection. Building applications where observation in transmission can occur are to be excluded. Hence, Lacobel T and Matelac T are not suitable for applications where the glass is backlit (neither naturally, nor artificially).

Please contact your local AGC representative for an alternative product for such applications.

12.1 Single glazing

Lacobel T and Matelac T can be used in single-glazing facades, as spandrel application, with insulation behind the spandrel.

The following restrictions apply to the position of the painted surface.



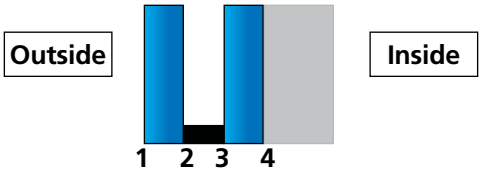
	POSITION OF THE PAINTED SURFACE	
	1	2
Lacobel T	NO	OK
Matelac T	NO	OK

NOTE:
Position 1 is facing the outside of the building; position 2 is facing the inside of the building.

12.2 Insulated glass units

Lacobel T and Matelac T can be assembled in insulated glass units, but only for spandrel applications. In no case the insulated glass units (IGU's) shall be visible from inside the building, to avoid observation in transmission.

Lacobel T and Matelac T can be assembled in insulated glass units (IGU) with the following restrictions on the position of the painted surface.



	POSITION OF THE PAINTED SURFACE IN THE DOUBLE GLAZED UNIT			
	1	2	3	4
LACOBEL T	NO	OK	NO	OK*
MATELAC T	NO	OK	NO	NO

*Be aware that temperatures inside the IGU can raise, as well as the temperature of the inner pane of the IGU, due to the colored surface of Lacobel T/Matelac T. The installer needs to take precautions in order to avoid burns for the final user, caused by touching the inner pane. This phenomenon is mostly noticeable when a low-e coating is placed in front of the Lacobel T/Matelac T glass.

NOTE:

- Position 1 is facing the outside of the building; position 4 is facing the inside of the building.

- No edge deletion of the Lacobel T/Matelac T paint is needed for purpose of assembly in IGU.
- In case an IGU is used for spandrel applications, **both glass panes need to be heat treated, and a silicone secondary sealant should be used.**

12.3 Structural glazing, primary and secondary sealing

Where the painted surface is in contact with the IGU sealant, the compatibility of the IGU primary and secondary sealants with the paint(s) shall be approved on a case by case basis.

Structural Glazing (single glazing and IGU spandrels)

Silicone is the only adhesive recommended for Lacobel T and the painted side of Matelac T in structural glazing applications.*

Interior

Supplier	Adhesive	Cleaner	Primer
Dow® Chemical	Dowsil™ 791	Dowsil™ R40 Cleaner	Not Required
Dow® Chemical	Dowsil™ 795	Dowsil™ R40 Cleaner	Not Required
Dow® Chemical	Dowsil™ 995	Dowsil™ R40 Cleaner	Dowsil™ C OS Primer Dowsil™ 1200 OS Primer
Liquid Nails® (PPG Chemical)	Fuze*It LN2000	Alcohol or Water Based Cleaner	Not Required

Exterior

Supplier	Adhesive	Cleaner	Primer
Dow® Chemical	Dowsil™ 795[1]	Dowsil™ R40 Cleaner	Dowsil™ C OS Primer Dowsil™ 1200 OS Primer
Dow® Chemical	Dowsil™ 995[1]	Dowsil™ R40 Cleaner	Dowsil™ C OS Primer Dowsil™ 1200 OS Primer

[1] Structural glazing applications will need to have required adhesion testing performed and approved by Dow

Primary and secondary sealing of IGU's for spandrel application

Sealant	Recommended Sealant Type		Manufacturer
Primary	Polyisobutylene (PIB)	Butylver	Fenzi
Secondary	Silicone	DC3362	Dow Chemical®
Secondary	Silicone	IG-16	Sika®
Weatherseal	Silicone	DC791	Dow Chemical®

Attention:

- The compliance of the IGU's to the CE- / CPR- requirements and the chemical compatibility are under the sole responsibility of the IGU fabricator, including testing and certification.
- The Crisp White color of Lacobel T and Matelac T is not fully opaque. There is a possibility to see the black sealing, in reflection, through the outer glass pane of the IGU.

*The matte side of Matelac T should never be used for structural glazing

12.4 Quality control

Quality control of the final product involves both ensuring compliance with the instructions in this fabricating guide, compliance with any standards applicable and performing thorough checks at each stage of the manufacturing process.

13. Interior application (single glass)

Lacobel T or Matelac T, after heat treatment, can be used as decorative glass for interior applications. See our recommendation in the Lacobel T and Matelac T Installation Guide for Interior Application on www.agcglass.com.

NOTE:
The Crisp White color of Lacobel T and Matelac T is not fully opaque, thus it cannot be glued, silicone adhesives are not recommended, instead use mechanical bonding methods.

14. Storage of cut sizes/insulated glass units

14.1 Fabricating in the same factory

After each fabricating stage, **cork or foam static cling or non-residue** adhesive tabs should be placed around the edges of the glass. The adhesive side should be attached to the glass side. The same also applies to packs containing differently sized sheets of glass. Dry paper with a neutral pH can also be placed between the sheets of glass.

The glass should be stored in line with the recommendations in Section 11.2

14.2 Sending cut sizes to another factory

If Lacobel T or Matelac T is to be transported from the fabricating factory to another factory, the following packaging recommendations should be followed:

- A 0.040" polyethylene foam spacer should be placed between each sheet; dry paper with a neutral pH can also be placed between the sheets of glass.
- Care must be taken to ensure that the pack is properly attached to the rack so that the sheets do not rub against each other.

14.3 On site

Where the glass is delivered on site, it must be stored in a dry, sheltered and well-ventilated area. It must never be laid on the ground or be stored either in the sun or near heat sources.

IV. CONFORMITY

It is the sole responsibility of the fabricator to adequately inspect the processed glass before and after each stage of production and prior to installation. Failure to apply the professional standards, routine instructions and fabricating guidelines contained in this fabricating guide and its linked documents will automatically absolve AGC of any liability in relation to the glass. We recommend that fabricators perform preliminary tests with the typical glass compositions for the project prior to any further commitment with their customers. The fabricator is solely responsible for the quality of the final product.

V. GLAZING INSTRUCTIONS

Please refer to AGC's glazing installation instructions for exterior and interior applications.

VI. CLEANING

Cleaning instructions for Lacobel T and Matelac T are available on www.agcglass.com.

VII. NOTES

Recommended gloves – See AGC Technical Service's document TSD-214
Recommended cutting oil – Acecut 5503 and Sogever 1100

VIII. DISCLAIMER

This document gives recommendations on how to maximize a qualitative fabricating of AGC Lacobel T and Matelac T products. AGC provides this information for advisory purposes only. The user/customer is solely responsible for using this guide.

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