

# GLAKS®

ORGANIC GLASS

*Guide to GLAKS®  
its many qualities and commercial advantages.*

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## ABOUT US

**Krono System srl** is a young dynamic company that produces **furniture components and panels**. It was founded by a group of entrepreneurs with thirty years' experience in the industry and a determined aim to increase the growth of their business and enhance their activities through **research, design and innovation, with a careful eye on the environment and users' health**.

Our company is located in Via Sali 25, Mansuè (TV), between Treviso and Pordenone, in the **"Livenza" quality furniture district**; our products are faced with **GLAKS® glossy and matt organic glass, and glossy or super matt Eurolux, stone, fabrics and leather, and many others**, all cutting edge products in line with the latest trends in the field of interior décor and homes.

Nowadays customers are keen on products with refined **particular finishes at competitive prices**.

Krono System also **guarantees quick punctual deliveries** and is organized to provide a **"just in time"** service that does not renounce quality in its products and customer service.

To choose Krono System means relating to a **partner of important renowned Italian and international brands** for whom we produce not only **components faced with GLAKS®, full PMMA, and Eurolux**, but also provide the excellence of the **Eurocomponenti brand: panels and components faced with HPL laminate** featuring special refined finishes that are unique of their kind.

## 40 YEARS OF INNOVATION AND QUALITY

Krono System is not just a manufacturer of unfinished products for the furniture industry, it is rather a laboratory that for forty years has sought to stimulate the industrial, furniture and design sectors by constantly seeking new technical and aesthetic solutions.

## WRITTEN AS GLAKS®, READ AS ORGANIC GLASS!

### A facing to replace glass

As luminous as glass, as robust as steel, as vivacious as a Renoir painting. Its glossy or matt colours make it a pleasure to see and touch: run your fingers over it to feel the sensation of velvety peach skin. GLAKS® by Krono System, for the love of quality.

## ABOUT GLAKS® AND HOW IT'S MADE

GLAKS® by Krono System is **100% extruded PMMA**, an extraordinary product resulting from research and experimentation that have made this product similar to glass, bettering it in flexibility, speed and price.

Its surface provides excellent resistance to abrasions, chemicals and light and has outstanding optical properties.

**GLAKS®** is an exclusive Krono System product; a **real organic glass** with a **glossy or matt fingerprint proof** surface and extraordinary resistance to **ultraviolet rays, scratches and chemicals**, a valid **alternative to silicon dioxide glass**. **GLAKS® is a non-toxic ecological product, also featuring excellent resistance to heat, water and stains**.

The colour range includes over 15 glossy and matt finishes.

## PMMA: A GUARANTEE FOR OUR HEALTH

Besides the uses mentioned above, PMMA is widely employed in other fields, especially automotive and medical. Some examples of its applications are: automobile rear lights, protective barriers in stadiums and the large showcase windows in aquariums. It is also popular for the production of "laser disks" (video disks) and occasionally for DVDs; however, for these (and for CDs) the more expensive polycarbonate is preferable because it has high resistance to humidity.

PMMA has a good degree of biocompatibility with human tissues. For this reason it is used in manufacturing intraocular lenses used in treating cataracts. Rigid contact lenses are also made in this polymer; certain types of soft contact lenses are made of similar polymers in which the methacrylate monomer structure houses one or more hydroxyl groups to make the polymer more hydrophilic, HEMA (hydroxyethylmethacrylate).

In orthopaedics PMMA is used as a "cement" for securing implants, remodelling lost pieces of bone or "repairing" fractured vertebrae (Vertebroplasty).

## TECHNICAL CHARACTERISTICS OF GLAKS®

### An extremely robust material

Due to a special surface treatment GLAKS® is an extremely robust material resistant to scratches, knocks, abrasions, chemicals and heat. These characteristics make it the ideal material for a wide range of applications.

GLAKS® has undergone many laboratory tests which have established its main qualities as:

- Shockproof
- Scratch and wear resistant
- Colour fast
- Easy to clean
- Heat resistant (up to 90°C)
- Hygienic
- Suitable for contact with food

In addition GLAKS® is resistant to bacteria and therefore particularly suitable for applications in places attended by the general public or where hygiene is extremely important, such as kitchens, living rooms, bedrooms, bathrooms, shops, laboratories and surgeries.

## USES AND INTENDED USE

GLAKS® is ideal for manufacturing indoor furniture, such as for example:

**Kitchens:** Doors, Shelves, Side Panels.

**Bathroom furniture:** Doors, Tops, Shelves, Side Panels.

**Bedrooms and Living Rooms:** Doors, Shelves, Tops.

**Offices:** Doors, Tops, Shelves, Partition walls.

**Shops and showrooms:** Doors, Shelves, Partition walls, Floors, Ledges.

**House doors** and Panels for security doors.

### Complementary items

**Table and desk tops**

## **TWENTY GOOD REASONS FOR USING GLAKS® COMPONENTS**

### **When you need solidness and Italian design**

1. GLAKS® is a product resulting from research and innovation, its resin is used in the medical field: contact lenses, cement for bone implants, articles for infants, etc.
2. Replaces and improves the performance of matt and glossy painted glass.
3. A good range of colours available.
4. 100% Quality Control.
5. Quick flexible production, entirely Italian.
6. Thick sheets: 2 mm. or 3 mm.
7. Polyurethane adhesive.
8. Resistant to abrasions.
9. Heat resistant.
10. Resistant to stains and chemicals.
11. Resistant surfaces that do not lose shine or deform.
12. Good light resistance.
13. Unbreakable.
14. Can be drilled and cut with ordinary woodworking tools.
15. Lightweight, can also be fitted to wardrobe doors without the need for special hinges.
16. Easy to clean.
17. Rapid delivery.
18. Time and money saving compared to glass.
19. Eco-compatible healthy product in line with Green Economy trends.
20. Does not transfer pathogens to food.

## PRODUCT TECHNICAL CHARACTERISTICS

Description	Backings	Exterior	Interior	Edging
<b>Doors, Drawers</b>	MDF E1	GLAKS® glossy/matt	PMMA Matt - GLAKS® glossy/matt	Acrylic in same colour, 1 mm. thick
<b>Side Panels</b>	MDF E1	GLAKS® glossy/matt	PMMA Matt - GLAKS® glossy/matt	Acrylic in same colour, 1 mm. thick
<b>Bars</b>	MDF E1	GLAKS® glossy/matt	PMMA Matt - GLAKS® glossy/matt	None
<b>Pressed Panels</b>	MDF E1	GLAKS® glossy/matt	PMMA Matt - GLAKS® glossy/brushed	None
<b>Interior Doors panels</b>	Sandwich	GLAKS® glossy/matt	GLAKS® glossy/brushed	Acrylic in same colour, 1 mm. thick

## TOLERANCES

Applicable tolerances are as follows: Standards: UNI EN 324/1 and UNI EN 324/2.

Product	Thickness	Length	Width	Square	Curvature
<b>Doors, Drawers</b>	± 0.4 mm.	± 0.2 mm.	± 0.2 mm.	± 0.4 mm. x ml	1 mm. x ml for > 16 mm. thick. 1,5 mm. x ml for 10÷15 mm. thick.
<b>Side Panels</b>	± 0.4 mm.	± 0.2 mm.	± 0.2 mm.	± 0.4 mm. x ml	1 mm. x ml for 16 mm. thick. 1.5 mm. x ml for 10÷15 mm. thick.
<b>Bars</b>	± 0.4 mm.	± 10 mm.	± 0.3 mm.	N.A.	1 mm. x ml for > 16 mm. thick 1.5 mm. x ml for 10÷15 mm. thick.
<b>Pressed Panels</b>	± 0.4 mm.	± 10 mm.	± 10 mm.	± 0.4 mm. x ml	1 mm. x ml for > 16 mm. thick. 1.5 mm. x ml for 10÷15 mm. thick. 2 mm. x ml for 8÷11 mm. thick. 2÷4 mm. x ml for < 8 mm. thick.
<b>Interior Doors panels</b>	± 0.4 mm.	± 0.4 mm.	± 0.4 mm.	± 0.4 mm. x ml	1 mm. x ml

## TECHNICAL/CONSTRUCTION SPECIFICATIONS

### How our GLAKS® coated products are manufactured

All the products mentioned below can be backed with: **MD, plywood, ABS, phenolic laminate, honey comb panels and others (Consult backing manual MT\_SP1).**

Krono System normally uses MDF, as it is not known where and in what type of climate the components will be employed. The customer must explain when ordering what type of substrate to apply, together with any other features and standards to observe. If such specifications are not provided, Krono System cannot be made liable for any carelessness.

### Doors and Drawers

Substrate: MDF, honey comb, plywood, phenolic laminate and others.  
External coating: 2 mm thick glossy or 3 mm thick matt GLAKS®.  
Internal coating: 2 or 3 mm thick matt PMMA in the same colour as the external coating.  
Edging: 4 sides with 1 mm thick acrylic in the same colour and finish as the external surface.  
Adhesive: polyurethane  
Minimum dimensions: 50x100 mm. – maximum 3050x1025 mm. – thicknesses 4 ÷ 60 mm

### Side Panels

Substrate: MDF, honey comb, plywood, phenolic laminate and others.  
External coating: 2 mm thick glossy or 3 mm thick matt GLAKS®.  
Internal coating: 2 or 3 mm thick matt PMMA in the same colour as the external coating.  
Edging: 4 sides with 1 mm thick acrylic in the same colour and finish as the external surface.  
Adhesive: polyurethane  
Minimum dimensions: 300x100 mm. – maximum 3050x1025 mm. – thicknesses 4 ÷ 60 mm

### Tops, shelves, table tops

Substrate: MDF, honey comb, plywood, phenolic laminate and others.  
External coating: 2 mm thick glossy or 3 mm thick matt GLAKS®.  
Internal coating: same as external – or – 2 or 3 mm thick matt PMMA in the same colour as the external coating.  
Edging: 4 sides with 1 mm thick acrylic in the same colour and finish as the external surface.  
Adhesive: polyurethane  
Minimum dimensions 500x200 - maximum 3050x1025 mm. – thicknesses 4 ÷ 60 mm. – possibility of made to measure tops.

### Interior Doors

Substrate: MDF, honey comb, plywood, phenolic laminate and others.  
External coating: maximum 3050x1025 mm.  
Internal coating: 2 mm thick glossy or 3 mm thick matt GLAKS®.  
Edging: 2 sides with 1 mm thick acrylic in the same colour and finish as the external surface.  
Adhesive: polyurethane  
Dimensions: 2100x500 ÷ 2800x1000 mm. – thicknesses 4 ÷ 60 mm

### Pressed Panels

Substrate: MDF, honey comb, plywood, phenolic laminate and others.  
External coating: 2 mm thick glossy or 3 mm thick matt GLAKS®.  
Internal coating: same as external – or – 2 or 3 mm thick matt PMMA in the same colour as the external coating.  
Adhesive: polyurethane  
Dimensions: 3050x1300 mm – thicknesses 4 ÷ 60 mm

## **PACKING, IDENTIFICATION**

### **How our GLAKS® coated products are packed**

All GLAKS® products are packed so that the material cannot be damaged during transport and storage on the customer's premises.

- a) The surface of each individual item is covered with protective film and provided with a multi-language care and use label;
- b) Products are packed onto pallets or platforms (hereinafter pallets) of suitable length and width for the panel dimensions, usually approximately 50 mm. larger than the panels;
- c) A support panel is placed between the pallet and panels;
- d) A sheet of cardboard is placed between each panel (for 3760x1300 mm. panels only);
- e) A support panel is placed on top of each pile;
- f) The pack made up in this way is secured with straps and shrink film.
- g) The pack is identified by a label attached to the short side up to a length of 2.20 m. From 2.40 m. up the label is attached to the long side.

## **TIPS FOR STORAGE AND PRESERVATION**

- a) The material must be stored on the original pallets, away from direct light and draughts. In winter ambient temperature should never drop below 18 °C. Sudden temperature changes could compromise stability.
- b) If the pack is unpacked for storage or production requirements, the precautions described in points a); b); c); d) and e) must be observed to the letter, as well as those in point 13 below, otherwise the warranty will no longer be valid.

## APPLICABLE LAWS AND TECHNICAL STANDARDS

Krono System applies only Italian law in producing its components.

Otherwise the customer shall state in writing when enquiring for a quote which law and country shall be referred to, clearly stating the articles involved and explaining their justification.

**TECHNICAL STANDARDS:** the applicable technical standards are those in the **UNI** and **UNI EN** series. Other standards can be applied only if requested in writing.

The technical standards applied and the technical characteristics of the coating, packs and supports are available from Krono System and can be applied for in writing.

## PRECAUTIONS, APPROVAL TESTS

If **GLAKS®** coated materials are to be further processed in the customer's workshops, certain precautions are necessary to avoid damaging the surfaces. We recommend in particular to:

- Check the quality of the material before machining, otherwise the warranty will no longer be valid.
- Keep the protective film in place on the surface and edges at all times.
- Check that work tables, belts, suction pads, etc. are clean and free of foreign bodies.
- Keep the surface clean and free of dust at all times.
- Attention! Superimposing other panels that are not clean may cause sagging, wrinkling, crushing and holes that could be highly visible on such a glossy finish.
- Handle the material with a suitable number of people for the weight and dimensions of the panels so that they are not rubbed or brushed against work tops or other panels.

## WARRANTY AND REPLACEMENTS

- The warranty covers non-conformity over the above-mentioned limits, found on receiving the goods.
- Replacements under the warranty will take place in approximately 10/15 working days. The acknowledged cost is exclusively the list price of the replaced item; other costs or debits of any kind whatsoever will not be recognised.



## INSTALLATION INSTRUCTIONS

**GLAKS®** has very high aesthetic qualities, especially in terms of shine. Because the material is hygroscopic its surface takes 2 or 3 days to reach complete hardness and scratch resistance as it absorbs normal humidity in the air. Remove the protective film only after finishing machining/installing the product, making sure the surface is not scratched with finger nails or sharp or abrasive objects.

### Colour samples

Colour samples can be provided for advertising or commercial purposes.

As the colour samples are taken from sheets produced at different times in different places the colours and finishes may appear different from those in stock. For this reason the samples cannot be used to compare colours/finishes, they are merely indicative and not exhaustive.

## ENVIRONMENTAL ASPECTS

GLAKS® is totally recyclable; at the end of the furniture's useful life remove all the hardware and take the panels to an eco centre or a wood recovery firm in your municipality, according to current norms and regulations.

After that, special processes will separate GLAKS® from its backing to become once again raw material for the production of ABS. The backing will provide material for the production of excellent quality chipboard panels.

## CERTIFICATION

Description	Reference Standards	Page number
Scratch resistance	UNI EN 15186: 2012 met.B	11
Resistance to temperature changes	UNI 9429: 1988	12
Accelerated assessment of surface shrinking	PTP 43:1995	13
Exposure cycle to heat, cold and humidity	UNI EN ISO 9142:2004	14
Surface resistance to cold liquids	EN 12720:2012	15

## CLEANING AND MAINTENANCE

Type of soiling	Recommended cleaning product and application method
Syrup – fruit juice – jam/marmalade - liqueurs - milk - tea – coffee - wine - soap - ink.	Water soaked sponge.
Animal and vegetable fats - sauces – dried blood – dry wine and liqueurs - eggs.	Sponge soaked in cold water with soap or household detergent. Rinse well and dry with a cotton cloth.
Black smoke - gelatine – vegetable and vinyl adhesives – organic residue, water colours - gum arabic	Sponge soaked in cold water with soap or household detergent. Rinse well and dry with a cotton cloth.
Hair lacquer – vegetable oil – castor oil - biro and felt pens - wax – greasy face foundation and powder – water marks left by solvents.	Alcohol or acetone applied with a cotton cloth. Rinse well and dry with a cotton cloth or kitchen paper.
Adhesive residue after eliminating protective film – acrylic or vegetable gum.	Sponge soaked in cold water with soap or household detergent. Rinse well and dry with a cotton cloth.
Residue or traces of silicone.	If completely dried they cannot be removed. Otherwise scrape off very gently with a wooden or plastic tool. Take great care not to scratch the surface.
Limescale deposits.	Detergents with low percentages of citric or acetic acid (max. 10%).

## CONGRATULATIONS

If you have come to the last page of this manual you are buying a **GLAKS®** product by Krono System. We congratulate you for choosing **GLAKS®** and not a more common cheap surrogate. **GLAKS®** is a valuable product and will stay with you and give great satisfaction for a long time: you will always be proud of your furniture in this fantastic material.

## DISCLAIMER

The product information sheets provide all the technical information regarding the performance of each product, based on tests carried out by approved certified bodies. Krono System reserves the right to modify and alter at any time the product composition and production process and therefore the performance features. Before using the product if you wish to enquire about variations and ask for updated information sheets, please contact our offices. Krono System declines all liability if the end user or customer refer to out of date information.