LE PAVE®

STANDARD OFFER

SoftSurface™

PS
POLYSTYRENE

GENERAL implementation instructions

SUMMARY

PS

A MUST READ

PS

Here are the general recommendations that are essential to ensure you get the most out of your PS panel.

- **The PS SoftSurface™ has a direction.** An aesthetic side, smoother, and a side dedicated to veneer.
- **The PS SoftSurface™ is stored flat.** The panels are stackable.
- **The PS SoftSurface™ is a structural material.** It is recommended as a worktop, however the support on which it is laid must always be reinforced. Care must therefore be taken with overhangs.
- **The PS SoftSurface™ is easy to work with the right tools.** Plunge saw, sliding table saw, panel saw, router, drill, CNC... It is necessary to connect to a vacuum cleaner when machining panels. A fast cutting speed and a high number of teeth are recommended to facilitate cutting.
- **The PS SoftSurface™ requires mandatory finish sanding.** This ensures its resistance, durability and aesthetics.
- **The PS SoftSurface™ can be glued and/or screwed.** Depending on the project, it is possible to use only screws or only glue. Do not hesitate to discuss this with our technical team if you have any doubts.
- **The PS SoftSurface™ is easy to maintain.** We recommend a microfiber cloth with white vinegar, although conventional cleaning products such as dishwashing liquid will also work. Do not place in direct contact with heat.
- **The PS SoftSurface™ must be worked with appropriate protective equipment.** An A2P2 mask must be worn when cutting and sanding PS panels.
- **The PS SoftSurface™ is a recycled and sustainable material.** We grind and re-inject our offcuts and those of our partner craftsmen into our production. Offcuts can also be disposed of in the yellow garbage can, taking care to mark the type of plastic with a marker. They will then be sorted in sorting centers. They can also be deposited in a plastic skip at a waste disposal center.
- **The PS SoftSurface™ is repairable.** Every 2/3 years, it is possible to renovate your Le Pavé panels by sanding them down, to make them look like new.

THE ESSENTIALS

The PS SoftSurface™ is fixed with glue and/or screws.

It is an innovative material with its own technical specifications, so we recommend that you follow our **instructions** and use our **references**.

In the instructions you will find some **general recommendations**, which you should follow to ensure an optimal experience with the material. Please read them carefully.

Here are the **4 essentials** to work the PS panel in the best conditions:

M3S
putty-glue

A2P2 mask

Abranet (Mirka)
sanding disks

Wood screw

To buy **Le Pavé® accessories**, scan this QR code, or go to 97 rue du Port 93300 Aubervilliers.

https://www.le-pave.com/professionnel-inscription/

MAIN APPLICATIONS

PS

Recommended projects with PS are based on its specific characteristics:

- **Structural**
- **Dimensional stability and flatness**
- **Adhesive (glues, varnishes, printing, silk-screening, etc.)**

Recommended applications

- **Table tops**
- **Work surfaces**
- **Structural furniture**
- **Floor covering**
- **Wall covering**
- **Signage**




PS cutting

Cutting is easier with **large tools** such as NC (numerical control) or sliding table saws. However, it is also possible to use portable tools, with the **appropriate blades**.

Cutting is the only real problem with PS if you don't use the right tools. Once understood, it is easy, and pretty similar to corian.

Aluminium / metal / plastic blade
Blade with a maximum of (small) teeth
Here, *Festool* reference
HW 160x1.8x20 F/FA52

Recommendations

- **Cutting in 2 passes makes cutting easier**

First pass at 8mm depth, then second pass, for example.

- **Number of teeth and rpm**

The more teeth and the smaller they are, the easier the cutting. The same applies to revolutions per minute.

- **Don't stagnate too long on the cut**

Cutting quickly will prevent the material from overheating.

- **Using a vacuum extraction is crucial**

If some chips stagnate, it will reagglomerate, so you should evacuate it directly.
Also, minimize processing dust (cutting and sanding) by working indoors (and sorting vacuum bags if possible).

- **Wearing a mask is important**

An A2P2 mask must be worn when cutting PS panels, to protect against VOC emissions.

PS machining

PS panels are rather dense.

Here are a few **recommendations** for **settings** that will make your machining **cleaner**.

Vacuum extraction is strongly recommended.

Laser cutting is not recommended on this type of plastic.

Finishing cutter
Here, *Leitz* reference HW/D12/NL35/S12/GL80/Z3/RE

Carbide milling cutter

Recommendations

- **Works best with positive-angle helical carbide tools**

This allows the chip to be evacuated to the outside, which is essential with PS.

- **Passes at 2 to 3 mm depth**
- **Rotational speed approx. 12-18,000 rpm**
- **8 m/min feed speed**
- **Extraction hood highly recommended**

Thicknesses

It's important to select the right thickness of PS for a viable and successful project.

In general, the rigidity of PS can be compared to that of compact wood.

8, 12, 15 ou 19 mm ?

15 et 19 mm.
Standard PS thickness.
This thickness allows for structurality, and the use of Clamex to join edges.

- Overhang: 20 cm max.
- Distance between two uprights: max. 40 cm.

12 mm.
This thickness provides structural strength in certain cases, with little overhang.

- Overhang: 10 cm max.
- Distance between two uprights: max. 25 cm.

8 mm.
This thickness is best used for veneering over another material.

- Overhang: 5 cm max.
- Distance between two uprights: max. 15 cm.

PS assembly

To assemble 15mm-thick PS sheets, **mechanical connectors** are needed to **guarantee the assembly structure**.

Clamex or domino **connectors can be dismantled and reused**, making them a very environmentally-friendly assembly method!

Wooden dowels also work perfectly.

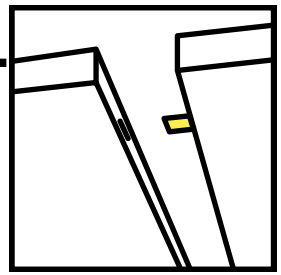
Clamex system

Mechanical domino *Festool*

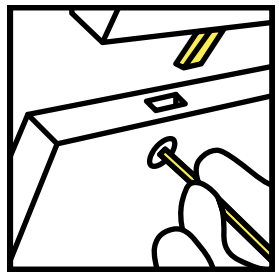
Wooden dowels

Cutting the grooves for the mechanical connectors with a **diamond cutter** will facilitate installation.

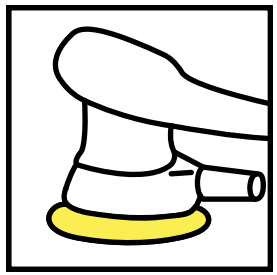
Tips



Make the **grooves / pre-holes** with the specific tooling, then insert the **connectors**.



Join the two parts (and tighten for Clamex). You can add a bead of glue to **seal the joints**.



Finish with 600-grit sanding to **make the joint even less visible**.

PS bonding

PS is an **easy material to bond**, as it has good adhesion.

Bonding works perfectly with **M3S**.
More conventional adhesives can also be used, such as special polystyrene adhesives, polymer mastics etc...

M3S putty-glue
putty-glue

Purchase: Espace Pro
Drying time: 48h
Length: 10m of cord
Color : White or black

PS bonding

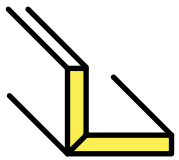
M3S is also recommended for making joints. We recommend cleaning the joint before drying, for a cleaner result.

However, it is possible to use other glues, such as corian / solid surface glue, which give very discreet finishes.

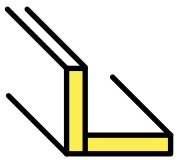
M3S putty-glue
putty-glue

Purchase: Espace Pro
Drying time: 48h
Length: 10m of cord
Color : White or black

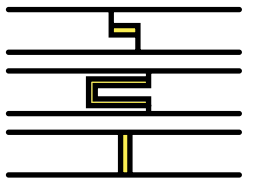
Joints can be treated in the same way as **conventional carpentry** (flat joint, straight edge-to-edge, etc.).



Mitered glue



Glued
edge-to-edge



Rabbet and tongue-and-groove assembly, edge-to-edge

PS drilling and screwing

PS is easy to fix mechanically. It does, however, have a certain **density**, which means it may be useful to **pre-drill** it before inserting a screw.

Wood, chipboard or dowel screws
Angles and edges of the panel.

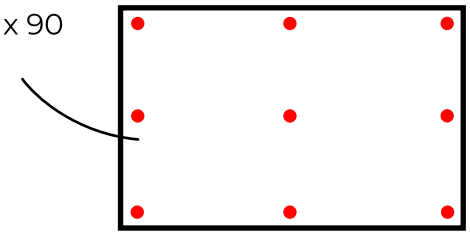
Metal drill

Recommendations

M3S is also recommended for joints. Other glues, such as corian glue, can also be used.

Examples

Example of layout for a 140 x 90 cm panel (6-9 screws).



A **pre-hole 1 mm smaller than the screw is recommended**, to avoid damaging the material.

PS sanding

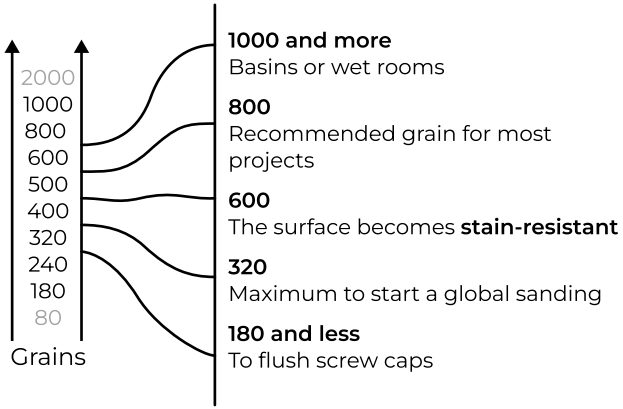
Panels are supplied with **320 grain**.
Once installed, they must be sanded with an **orbital sander** (to avoid streaking).
This is the final touch that guarantees the **aesthetics** and **durability** of the PS panel.

Abranet (*Mirka*) sanding disks

Purchase: Espace Pro (available in kits (180-1000))

Our panels are supplied with 320 grain, so it's best to **start sanding with 320 grain**, and **gradually work up to 800 grain minimum**.
In all cases, the material remains **matt** with this type of sanding.

Tips



Recommendations

- **Wearing a mask**

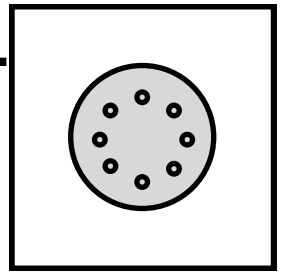
It is compulsory to wear an A2P2 mask when cutting PS panels, to protect against VOC emissions.

PS polish

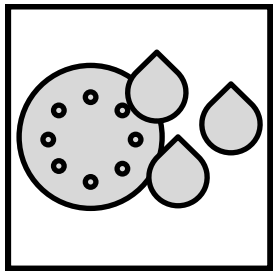
It is possible to **polish a PS panel** to give it a **shinier appearance**.

Polishing a PS panel requires **multi-stage sanding** for optimum results.

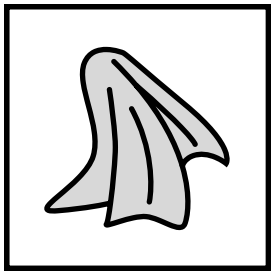
Tips



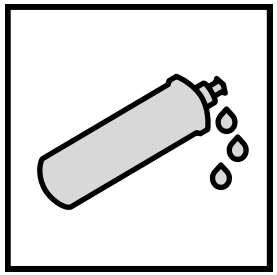
Sanding to 1000 grit.



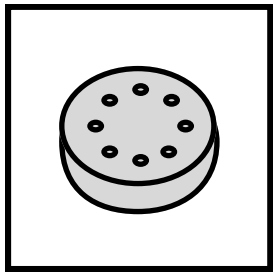
Water-sanding, 2000 grit.



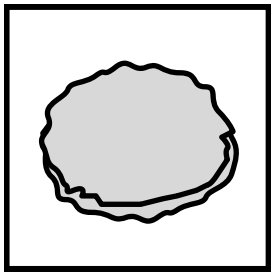
Wipe with a microfiber cloth.



Apply polishing paste.



Sand with a polishing wheel.



Sand with a chamois disk.

PS maintenance

PS is a resistant material. Once **sanded**, it is **water-repellent** and **stain-resistant**.

Note that it can take a few knocks (scratches for example) at the beginning of its life, but PS develops a **patina over time**, making it a material that ages very well.

Here are a few recommendations, however.

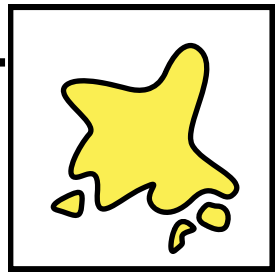
PS varnishing

PS is a **resistant basic material** that **generally needs no coating** whatsoever.

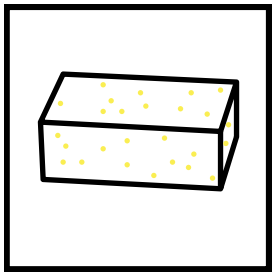
However, depending on the situation, the use of a varnish may be of interest. Here are a few references:

- **Worktop**: *Worktop V33 varnish*
- **Floor**: Parquet varnish *Nature protect SYNTILOR*
- **Exterior**: *Sofolk plastic varnish*

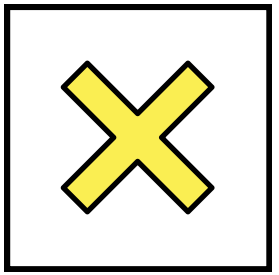
Tips



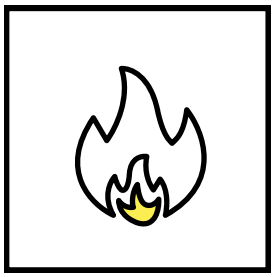
As with any material, it is **not recommended to leave liquids standing** on the surface.



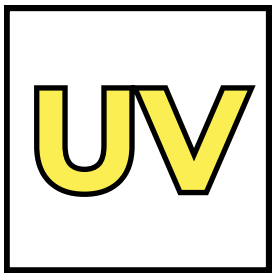
You can use just about any type of **conventional cleaner** (soap, white vinegar, etc.).



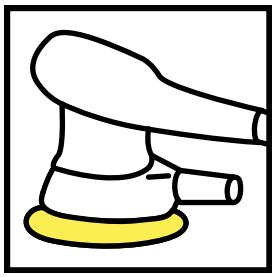
We **do not recommend** the use of **corrosive products** (acetone, white spirit, etc.).



PS is **resistant up to 90°C**.
We do not recommend direct contact with hot pans, for example.



Panel color remains **stable over time**. **Slight tarnishing** may occur with intensive exposure to outdoor UV rays.



After several years of use, or if markings persist, it is possible to carry out a **complete new sanding**, which will restore the material's new appearance.

PS thermoforming

To give your PS panel a **curvature** other than by mechanical bending, it can be thermoformed.

Recommendations

Every PS thermoforming project requires a preliminary **prototyping** phase.

Here's a rough idea, but it obviously depends on the type of project, and the curves and dimensions required:

1. Heating the material

- Using a proofer or membrane oven. In the oven, place the panel on a grid or aluminum plate.

Heat for 1 minute per millimeter at 120°C (248°F).

2. Cooling the material

- The material cools very quickly at room temperature.

Examples

TECHNICAL SHEET

PS

GENERAL

Composition :	100% recycled Polystyrene
Length :	1420 mm / 2400 mm
Width :	920 mm / 1350 mm
Straight corner :	Yes
Thickness :	Standard : 15 mm (8 and 12 mm available)
Product finish :	Matte / glossy
Water repellent :	Yes
Load-bearing / structural :	Yes
Treatment :	None
Anti stain :	Polish or varnish the material
Anti UV :	Vanish the material
Surface :	Smooth
Cuttable :	Yes
Sanding :	Yes - Our panels are delivered sanded to 320 grit on the front side, rough surfaced on the back
Product density :	1050 kg / m^3
Thickness tolerance :	+/- 0.5mm thickness
Maintenance :	We recommend using a micro-fiber cloth and white vinegar for surface maintenance.
Manufacturing :	100% française

MECHANICAL

Elastic modulus in tension :	1850 MPa
Threshold stress at failure :	30 MPa
Charpy shock with notch :	5 kJ/m2
Hardness :	78
HDT load deflection :	74.4°C (165 °F)

THERMAL

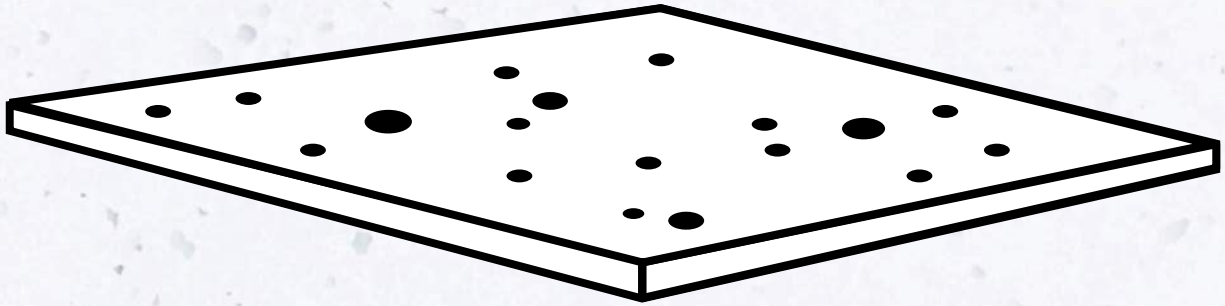
Surface resistance to dry heat :	90°C (194 °F)
Linear expansion :	0.5 mm/m/10°C
Heat coefficient :	0.1 W/m.K
Fire resistance :	Unclassified

SANITARY

Indoor air quality :	French A+ labeling (COV)
REACH compliant :	Yes

The information provided is for guidance only and does not constitute a guarantee of the product delivered.

Click here to find our public references



Visit the **Espace Pro** to access technical manuals, price lists, video tutorials, E-Shop...

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Need to place an order?
Questions about prices or lead times?
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