This document is intended to provide general recommendations only. Trespa provides these guidelines and all testing, code and design data for informational purposes only and strongly advises that the customer, project owner and architect seek independent advice from a certified construction professional and/or engineer regarding application and installation as well as compliance with design requirements, applicable codes, laws and regulations, and test standards. Please check your local codes and applicable design requirements for proper use.

**General guidelines**

- As a result of their composition, Trespa® Athlon®, Trespa® Virtuon®, Trespa® TopLab® ECO-FLAME® and Trespa® TopLab® PLUS® can expand and contract just like hard wood.
- The temperature and humidity acting on the front and rear sides should not differ over a long period of time.
- Undersides of horizontal workbenches and rear sides of vertical wall cladding should therefore be well ventilated.
- Panel edges should not be permanently wet. If panels are held in profiles, the profiles must be provided with drainage devices.
- When fixing panels it is important to take account of a maximum movement of 2.5 mm/m² (except laboratory benching). Drillholes and joints must be dimensioned accordingly.
- Do not fix screws too tightly in order to allow the panels to move.

**Glueing**

- Trespa® panels can be glued to many materials with one or two part adhesives, e.g. epoxy or polyurethane adhesive systems.
- Glueing is in many cases carried out together with a mechanical fastening to provide sufficient pressing during drying.

<table>
<thead>
<tr>
<th>Glue type</th>
<th>Application</th>
<th>Open time</th>
<th>Pressure</th>
<th>Pressure time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epoxy</td>
<td>100-250g/m²</td>
<td>depends on type</td>
<td>0,2 N/mm²</td>
<td>4-8 hours at 20°C</td>
</tr>
<tr>
<td>Polyurethane</td>
<td>100-250g/m²</td>
<td>depends on type</td>
<td>0,2 N/mm²</td>
<td>4-8 hours at 20°C</td>
</tr>
</tbody>
</table>

Please follow the instructions below for thickening the edges of panels with strips of Trespa®:

- Make sure panels and strips have the same “grain direction”;
- Pre-condition panels, strips and adhesive in the same way (temperature and humidity preferably the same as the future conditions of use);
- Remove grease from surfaces to be glued, slightly roughen them and ensure they are dust-free;
- Observe strictly the instructions provided by the adhesive supplier.

**Fixings**

Choice of fixings and availability per country is dependant on national regulations. Contact your local Trespa office.
**Product**

Trespa® TopLabPLUS®, Trespa® TopLabECO-FIBRE® or Trespa® Athlon® (Crystal Matt surface texture). Please check [www.trespa.info](http://www.trespa.info) for the detailed and up to date Delivery Programme or contact your local Trespa representative.

**Fixing**

Fix with inserts or thread cutting screws. Pre-drilled holes must be made in such a way that a residual thickness of at least 2 mm remains on the visible side of the panel. Drillhole diameter in panels according to the instructions of the supplier of the fixing means. Drillholes in the support construction must allow the panels to move: fit slotted holes or allow diameter of the drillholes equals screw diameter plus 3 mm. If more than two panels are joined together (e.g. for long wall benches), slotted holes of sufficient length must always be made in the support construction.

**Support construction**

The support construction made of steel or aluminium must be sufficiently strong and rigid to withstand bending as a result of the load applied on top of the panel. If any other fittings are provided underneath the panel (drawers, boxes, pipes), then the support construction must be dimensioned accordingly. Please find below general guidelines for fixing distances.

**Maximum support and fixing distances**

Writing desks and worktops supported at the edges.

<table>
<thead>
<tr>
<th>Panel thickness</th>
<th>Panel width</th>
<th>Maximum panel length</th>
</tr>
</thead>
<tbody>
<tr>
<td>13 mm</td>
<td>700 mm</td>
<td>unlimited*</td>
</tr>
<tr>
<td></td>
<td>800 mm</td>
<td>unlimited</td>
</tr>
<tr>
<td></td>
<td>900 mm</td>
<td>unlimited</td>
</tr>
<tr>
<td></td>
<td>1000 mm</td>
<td>1400 mm</td>
</tr>
<tr>
<td></td>
<td>1100 mm</td>
<td>1100 mm</td>
</tr>
<tr>
<td>16 mm</td>
<td>800 mm</td>
<td>unlimited*</td>
</tr>
<tr>
<td></td>
<td>900 mm</td>
<td>unlimited</td>
</tr>
<tr>
<td></td>
<td>1000 mm</td>
<td>1800 mm</td>
</tr>
<tr>
<td></td>
<td>1100 mm</td>
<td>1500 mm</td>
</tr>
<tr>
<td></td>
<td>1200 mm</td>
<td>1300 mm</td>
</tr>
<tr>
<td>20 mm</td>
<td>1000 mm</td>
<td>unlimited*</td>
</tr>
<tr>
<td></td>
<td>1100 mm</td>
<td>unlimited</td>
</tr>
<tr>
<td></td>
<td>1200 mm</td>
<td>1800 mm</td>
</tr>
<tr>
<td></td>
<td>1300 mm</td>
<td>1600 mm</td>
</tr>
<tr>
<td></td>
<td>1400 mm</td>
<td>1500 mm</td>
</tr>
<tr>
<td>25 mm</td>
<td>1100 mm</td>
<td>unlimited*</td>
</tr>
<tr>
<td></td>
<td>1200 mm</td>
<td>unlimited</td>
</tr>
<tr>
<td></td>
<td>1300 mm</td>
<td>2600 mm</td>
</tr>
<tr>
<td></td>
<td>1400 mm</td>
<td>2000 mm</td>
</tr>
<tr>
<td></td>
<td>1500 mm</td>
<td>1700 mm</td>
</tr>
</tbody>
</table>

*Please contact your local Trespa office for the current delivery program.

*unlimited* means: maximum available panel length.
Span over 2 or more supports

<table>
<thead>
<tr>
<th>Number of supports</th>
<th>Panel thickness</th>
<th>Maximum support interval L</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Writing desk load &lt; 35 kg/m²</td>
</tr>
<tr>
<td>2</td>
<td>13 mm</td>
<td>850 mm</td>
</tr>
<tr>
<td></td>
<td>16 mm</td>
<td>950 mm</td>
</tr>
<tr>
<td></td>
<td>20 mm</td>
<td>1100 mm</td>
</tr>
<tr>
<td></td>
<td>25 mm</td>
<td>1300 mm</td>
</tr>
<tr>
<td>3</td>
<td>13 mm</td>
<td>1050 mm</td>
</tr>
<tr>
<td></td>
<td>16 mm</td>
<td>1200 mm</td>
</tr>
<tr>
<td></td>
<td>20 mm</td>
<td>1400 mm</td>
</tr>
<tr>
<td></td>
<td>25 mm</td>
<td>1500 mm</td>
</tr>
<tr>
<td>4</td>
<td>13 mm</td>
<td>1000 mm</td>
</tr>
<tr>
<td></td>
<td>16 mm</td>
<td>1000 mm</td>
</tr>
<tr>
<td></td>
<td>20 mm</td>
<td>1000 mm</td>
</tr>
<tr>
<td></td>
<td>25 mm</td>
<td>1000 mm</td>
</tr>
</tbody>
</table>

(the maximum panel length is 3050 mm)

Fixing distances

- Minimum distance from the edge: 20 mm.
- Maximum distance from the edge: 150 mm.
- At least 6 screws per m² of panel surface area.
- Distribute screws evenly throughout the support construction.
LABORATORY WORKTOPS

Product
Trespa® TopLabPLUS®, Trespa® TopLabECOFIBRE® or Trespa® Athlon® (Crystal Matt surface texture). Please check www.trespa.info for the detailed and up to date Delivery Programme or contact your local Trespa representative.

Durability, maintainability, reliability and aesthetics are optimised when the worktop is machined correctly. Trespa® panels can be tailored to the technical discipline of the laboratory.

Some examples of how Trespa® panels can be adapted to particular work needs and conditions are illustrated in the next pages.

Minimum standards of design

Support construction: please consult the general guidelines in the previous chapter “horizontal writing desks and worktops”.

Joints
It is recommended that the joint between two benches should be level, strong and easy to clean (dependent on specification). As a general rule joints should be away from sink areas and not over or close to supports. It is generally accepted that the distance from a joint to the end of bench should be greater than the overall width of the bench.

Edges
Edges should be safe, free from saw marks and jagged edges. For better appearance it is advised to polish edges.

Accessories
The machinability of Trespa panels allows the easy incorporation of sinks (stainless steel, epoxy, polypropylene), drip cups (polypropylene) and marine edges (epoxy).
### Joints

<table>
<thead>
<tr>
<th>Chemical and analytical areas</th>
<th>Biological and clinical areas</th>
<th>Physical and educational areas</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="joint1.png" alt="Joint Diagram" /></td>
<td><img src="joint2.png" alt="Joint Diagram" /></td>
<td><img src="joint3.png" alt="Joint Diagram" /></td>
</tr>
</tbody>
</table>

- **Spline joint with chamfer**
  - Chamfer will reduce the likelihood of chipping caused by sliding heavy objects.
  - Will disguise any irregularities in the levels of two adjoining bench worktops.
- **Spline joint with sealant**
  - Specified where hygiene and cleanliness are important.
  - Sealant can be cleaned, removed and replaced if necessary and reduces the likelihood of penetration by liquids.
- **Standard spline joint**
  - Spline assists the joining of two separate panels.
  - Establishes a strong joint.

### Edges

<table>
<thead>
<tr>
<th>Chemical and analytical areas</th>
<th>Biological and clinical areas</th>
<th>Physical and educational areas</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="edge1.png" alt="Edge Diagram" /></td>
<td><img src="edge2.png" alt="Edge Diagram" /></td>
<td><img src="edge3.png" alt="Edge Diagram" /></td>
</tr>
</tbody>
</table>

- **Chamfer edge and drip groove**
  - Size of chamfer is recommended to be at least 2 mm.
  - Chamfer reduces instances of chipping to surface edge.
  - Drip groove minimizes the risk of hazardous chemicals finding their way into underbench draws and storage areas.
- **Crescent edge**
  - Decorative edge for dry areas and write-up benches.
  - Easy to decontaminate.
- **Standard edge (chamfer)**
  - Size of chamfer is recommended to be at least 2 mm.

### Sink holes

<table>
<thead>
<tr>
<th>Chemical and analytical areas</th>
<th>Biological and clinical areas</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="sink1.png" alt="Sink Diagram" /></td>
<td><img src="sink2.png" alt="Sink Diagram" /></td>
</tr>
</tbody>
</table>

- **Sink hole with edge drip groove for underslung sink**
  - Drip groove helps to prevent liquid spills creeping through joints and into underbench areas.
  - Spills can easily be wiped into the sink.
- **Sink hole with finish as cut for drop in sink**
  - Easy to clean where contamination is a concern.
  - Ensures the integrity of experiments.
  - Drop in sinks are advised where contaminated liquids are used.
Furniture Installation Details

Product

Trespa® Virtuon® and Trespa® Athlon® are very well suited for applications requiring detailed design work and subtle finishing effects.

Edge finish on the work surface

Single ply

Double ply

A. Planing after the glue has hardened
B. Glued joint
C. Mechanical joint
   Screw diameter: 4.5 mm, pre-drill with 4 mm diameter

Double ply with connector

A. Trespa® 6 mm
B. Ventilation
C. Door
D. Body
E. Mechanical joint
   Screw diameter: 4.5 mm, pre-drill with 4 mm diameter
F. Door stops (rubber, PVC)

Corner joint

Screw-fixed

A. Trespa® 13 mm
B. Screw: 4.5 x 35 mm.
   Pre-drill with 4 mm diameter, depth 25 mm.
   If desired, place cover cap every ± 250 mm.
   Minimum distance from the edge: 20 mm.

Screw-fixed/glued with recess

A. Trespa® 13 mm
B. Screw: 4.5 x 35 mm.
   Pre-drill with 4 mm diameter, depth 25 mm.
   Minimum distance from the edge: 20 mm.
**Corner joint**

**With glue-fixed L profile**
- A Trespa® 13 mm
- B Aluminium L profile 30 x 30 x 3 mm

**Glued**
- A Trespa® 13 mm

**With screw-fixed L profile**
- A Trespa® 13 mm
- B Aluminium L profile 30 x 30 x 3 mm
- Mechanical joint every ± 100 mm
- C Screw: 4 x 12 mm, pre-drill with 3 mm diameter, depth 10 mm

**With glue-fixed tongue**
- A Trespa® 13 mm
- B Aluminium tongue

**Bottom edge-finish**
- A Door
- B Bottom panel
- C Door stop
- D Ventilation
- E Adjustable legs
- F Skirting (clicked)
- G Silicone sealing mastic

A Top view
- A Door
- B Bottom panel
- C Ventilation spaces to improve ventilation, especially if high moisture levels are likely
**Drawer finish**

**Glue-fixed drawer base**
- A Drawer front
- B Drawer rail
- C Drawer base in Trespa® 6 mm
- D Bottom panel in Trespa® 13 mm

**Screw-fixed drawer base**
- A Drawer rail
- B Drawer base in Trespa® 6 mm (large surfaces)
- C Bottom panel in Trespa® 13 mm

**Back panel finish**

**Glue-fixed with 6 mm Trespa®**
- A Back panel in Trespa® 6 mm
- B Glue

**Screw-fixed with 6 mm Trespa®**
- A Back panel in Trespa® 6 mm
- B Screw diameter: 3.5 x 20 mm, Pre-drill diameter: 3 mm, depth: 20 mm
- C Screw diameter: 4.5 x 35 mm, Pre-drill diameter: 4 mm, depth: 35 mm

**T joints**

**Screw-fixed**
- A Trespa® 13 mm
- B Mechanical joint. Screw diameter: 4.5 x 35 mm. Pre-drill diameter: 4 mm, depth: 35 mm. Cover cap optional.

**Glue-fixed with groove**
- A Trespa® 13 mm
- B Glue

**Glue-fixed with tongue**
- A Trespa® 13 mm
- B Aluminium tongue or lamellas
**Hinges**

- stainless steel concealed hinges: use where high demands are placed on corrosion resistance and chemical resistance;
- galvanised steel hinges: for the remaining applications.

Important: if 13 mm thick doors are used, the drill depth is 11 mm maximum, which makes some hinges unsuitable. Doors thicker than 13 mm are suitable for all hinges. The manufacturers instructions regarding maximum load, number of hinges, etc., should always be taken into account.

- stainless steel: use where high demands are placed on corrosion resistance, chemical resistance, cleanability, etc.

Important: this hinge has the following properties:
- corrosion resistant;
- high resistance to chemicals;
- wide opening angle up to 240°;
- the entire cupboard space can be used.

- stainless steel: use where high demands are placed on corrosion resistance and chemical resistance;
- galvanised steel: for the remaining applications.

Important: this hinge is available with single or double hinge, with or without catch:
- special single-axle hinge;
- wide opening angle up to 240°;
- suitable for module systems;
- 5 mm thick pin;
- level with side panel when 13 mm panel is used.
PARTITIONS

Product
Trespa® Virtuon® (Satin texture) and Trespa® Athlon® (Quartz texture). Please check www.trespa.info for the detailed and up to date Delivery Programme or contact your local Trespa representative.

Thickness
13 mm upwards (most suppliers of auxiliary equipment match their products to this panel thickness).

Fixing
Foot brackets, wall brackets, profile systems and suspending and locking devices must be of a sufficiently heavy design to be able to support the weight of the panels, and to withstand the mechanical strains acting on the panels.

Maximum fixing intervals when fixed on supports
- On the top and bottom sides of supported panels:
  - maximum panel height 2100 mm;
  - maximum distance from the edge R 150 mm.

<table>
<thead>
<tr>
<th>Panel thickness</th>
<th>Maximum fixing distances L</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2 supports</td>
</tr>
<tr>
<td>13 mm</td>
<td>950 mm</td>
</tr>
<tr>
<td>16 mm</td>
<td>1100 mm</td>
</tr>
</tbody>
</table>

- Panels supported on both vertical sides
  - Maximum distance from the edge R 150 mm.

<table>
<thead>
<tr>
<th>Panel thickness</th>
<th>Panel width</th>
<th>Maximum fixing distances L</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>2 supports</td>
</tr>
<tr>
<td>13 mm</td>
<td>&lt; 1200 mm</td>
<td>800 mm</td>
</tr>
<tr>
<td>16 mm</td>
<td>&lt; 1350 mm</td>
<td>950 mm</td>
</tr>
</tbody>
</table>

- Panels supported on one vertical side
  - Maximum distance from the edge R 100 mm for 10 mm panels.
  - Maximum distance from the edge R 150 mm for 13 mm and 16 mm panels.

<table>
<thead>
<tr>
<th>Panel thickness</th>
<th>Panel width</th>
<th>Maximum fixing distances L</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>2 supports</td>
</tr>
<tr>
<td>10 mm</td>
<td>&lt; 300 mm</td>
<td>400 mm</td>
</tr>
<tr>
<td>13 mm</td>
<td>&lt; 400 mm</td>
<td>500 mm</td>
</tr>
<tr>
<td>16 mm</td>
<td>&lt; 450 mm</td>
<td>550 mm</td>
</tr>
</tbody>
</table>
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