Laminex® Brushed Stainless Steel Laminate

Laminex Brushed Stainless Steel is a high-pressure laminate manufactured with genuine stainless steel metallic foils. It is resistant to solvents, chemicals and household reagents. Laminex special fabrication conditions apply as a consequence of the physical properties of the stainless steel foil.

APPLICATIONS
Laminex® Brushed Stainless Steel laminate is suitable for vertical doors, exhibition stands, shopfitting or any area where a decorative metal look is required. It is not suitable for exterior applications.

PRODUCT CHARACTERISTICS
Sizes:                Thickness:                Weight:
Brushed Stainless Steel 2400 mm x 1200 mm 0.8 mm 1.7 kg per m² approx.

FIRE TESTS
(Typically achieved when tested to AS/NZS 1530.3)

<table>
<thead>
<tr>
<th>Indices</th>
<th>Result</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ignitability</td>
<td>0</td>
<td>0-20</td>
</tr>
<tr>
<td>Spread of Flame</td>
<td>0</td>
<td>0-10</td>
</tr>
<tr>
<td>Heat Evolved</td>
<td>0</td>
<td>0-10</td>
</tr>
<tr>
<td>Smoke Developed</td>
<td>0</td>
<td>0-10</td>
</tr>
</tbody>
</table>

Cone Calorimeter AS/NZS 3837 (Irradiance of 50kW/m²)

<table>
<thead>
<tr>
<th>Classification</th>
<th>Result</th>
<th>Unit/Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group Number</td>
<td>1</td>
<td>1-3</td>
</tr>
<tr>
<td>Average Specific Extinction Area</td>
<td>80.3</td>
<td>m² / kg</td>
</tr>
</tbody>
</table>

* 0.8mm Laminate unadhered

WHEN SPECIFYING
Surfacing shall be Laminex Metallic laminate as supplied by The Laminex Group.

CARE AND MAINTENANCE
Although Laminex Brushed Stainless Steel laminate is resistant to most common household chemicals and solvents, it is good practice to always clean up spills as they occur. Avoid the use of abrasive cleaners for routine maintenance, even those in liquid form.

Laminex Brushed Stainless Steel laminate should only be cleaned with a soft, moist cloth or moist chamois leather and then dried with a soft, dry cloth. For more persistent marks, use a blue window cleaner such as Extra Strength Windex™ or methylated spirits. Proprietary stainless steel cleaner can also be used if necessary.

Laminex Brushed Stainless Steel laminate should not be exposed to temperatures in excess of 80ºC.

Just as for solid stainless steel sheeting, Laminex Brushed Stainless Steel laminate will scratch under certain conditions.

SITE WORK NOTES
Special machining requirements are necessary for fabricating Laminex Brushed Stainless Steel laminate (see information contained within the following pages) therefore it is not practical to carry out on-site fabrication. It is critical that the design for any particular application relies on shop machining, with only minimal on site finishing to be employed.
Laminex Brushed Stainless Steel laminate is supplied with a protective film on the surface. This should be left intact during transport, handling and fabrication.

**Warning:** do not expose the Brushed Stainless Steel laminate with protective film to prolonged periods of direct UV exposure, as this will cause the film adhesive to harden, making removal difficult. If for any reason the film becomes firmly adhered to the laminate surface, removal may be facilitated by the gentle application of hot air to soften the adhesive. It is only necessary to heat the laminate so that it feels warm at the back – care must be taken not to heat the laminate above 80ºC. Residual adhesive may be removed using acetone or petroleum based solvents.

**FABRICATION**

Laminex Brushed Stainless Steel laminate can be bonded to a range of suitable substrates such as MDF, particleboard or plywood using conventional adhesives such as cross linking PVA, contact or epoxy adhesives.

**Note:** Urea-formaldehyde adhesives are not suitable.

Laminex Brushed Stainless Steel should be fully supported when glued. Do not bond directly to plaster, plasterboard or concrete.

See also other general site work notes in Appendix 1, section 9.1.

**MACHINING**

The tools, cutters and methods that are normally used to process high pressure laminates are not designed to be used with such a hard surface as stainless steel, and if applied to stainless steel laminates it will result in damaged equipment, burring of the edges of the stainless steel foil, and delamination of the stainless steel foil from the phenolic impregnated kraft backing.

Machining of Brushed Stainless Steel laminate can be carried out using point-to-point or similar routing equipment and cutters designed for use with stainless steel (see below).

**Required parts:**
300 x 300 296 Saw Blade Leitz Part No. 68800
16mm Spiral roughing cutter Leitz part No. 42507
18mm Up and down spiral cutter Leitz part No. 42538
or Leitz equivalent part.

**Notes:**
The cutters detailed above are designed for the trimming function only. All components must first be cut to a dimension no greater than 4 mm oversize to the finished dimensions. It is recommended that a waste board be clamped to the laminate surface prior to saw cutting to obviate saw "chatter" that might lead to delamination of the foil surface. Use a feed speed of 7m/min. and a blade speed of 3000 RPM.

**MACHINING CRITERIA**

For use with point-to-point or similar routers.

1. Programme the head in the Z direction to enable the cutter to continually and gradually pass vertically through the panel during each machining leg, from say 1mm to 10mm, depending on the panel thickness and the cutter length. This action considerably increases cutter life.

2. Cutter speed 2500 RPM (Twist direction of the tool so that the cutting edge always presses the Brushed Stainless Steel laminate against the substrate.

3. Feed speed 2 lineal metres per minute.

4. Initial cutting by 16mm spiral roughing cutter to remove 2-3 mm of waste.

5. Final machining of 1 mm (maximum) with 18mm up and down spiral-finishing cutter.

**EDGING**

It is possible to produce edge laminate strips from off-cut product, but it is important to ensure that chattering of the laminate does not occur as the laminate passes through the saw blade. If chattering occurs then minor delamination of the stainless steel foil may result.

It is preferable that any edging be produced using a guillotine. Small tools such as the Virutex hand guillotine can be used for this function. Care should be taken in determining the dimensions of the laminate to be guillotined due to the extremely hard nature of the stainless steel foil, therefore it is suggested that minimal over trim be used, to enable a fast and clean finishing off of the laminate edge to both faces of the panel.

Slight burring may be removed by careful use of a fine file, only applying pressure on the downward stroke in the direction of the laminate surface to prevent delamination.

**COLOUR CONSISTENCY**

By their nature, the metal foils used in the production of Laminex Brushed Stainless Steel laminate may vary slightly in colour from batch to batch.

Where colour consistency between adjacent panels is important, it is critical that manufacture dates or batch numbers (printed on the back of the laminate) are checked to ensure that they are the same. This will avoid the need to remove protective film to check colour or to take special steps where shop/warehouse lighting conditions are not ideal.