

Laminex® Squareform® Benchtops with Protec+®

Laminex Squareform, with Protec+® antimicrobial surface technology, is a laminated bench top produced to a thickness of 39mm and incorporates a square-shape moulded edge. The radius of the external moulded edge is 5mm providing a square look to the profile. Moisture resistant particleboard is used to ensure maximum water resistance. The use of high-pressure laminate with Protec+® on the surface of the bench top provides a hardwearing and durable decorative surface that inhibits bacterial and fungal growth.



APPLICATIONS

Laminex® Squareform® Benchtops with Protec+® are designed for applications such as kitchen worktops, countertops, bathroom vanities and laundry bench tops where a durable more hygienic decorative surface is required.

PRODUCT CHARACTERISTICS

Thickness:	39mm
Weight:	25kg / m ²
Profile:	Square shape, 180 degree rolled edge, 5mm radius moulded top and bottom edges.
Finish:	Natural, Flint, Spark.
Colours & Pattern Range:	Refer to current Squareform™ brochure

The ends of Laminex Squareform Benchtops are not post formed. Colour-matched laminate can be used to cap ends as required.

FIRE TESTS (Laminate only)

(Typically achieved when tested to AS/NZS 1530.3)		
Indices	Result	Range
Ignitability	0	0-20
Spread of Flame	0	0-10
Heat Evolved	0	0-10
Smoke Developed	4	0-10

Typical Cone Calorimeter AS/NZS 3837 (Irradiance of 50kW/m ²)		
Classification	Result	Unit/Range
Group Number	2	1-3
Average Specific Extinction Area	44.9	m ² / kg

Laminex non-adhered

Due to test method inconsistencies, the fire resistant performance of Squareform laminate can sometimes be better than the group number stated in the above table. As this product does not contain fire retarding additives, Laminex declares the laminate sheet as a Group 2, even though test certificates may indicate better performance. Laminex takes no responsibility if the product is used in applications requiring a Group number of better fire resistant performance than that stated in this Technical Data Sheet.

FIRE TESTS (Benchtop)

(Typically achieved when tested to AS/NZS 1530.3)		
Classification	Result	Unit/Range
Group Number	3	1-3

PROPERTIES

Laminex Squareform Benchtops with Protec+ are decorated using high-pressure laminate. The surface hardness of high-pressure laminate provides resistance to surface wear and scratching under normal conditions of use. High-pressure laminate is adhered to the particleboard surface using a durable adhesive, which ensures surface bond soundness. The use of moisture resistant particleboard substrate ensures structural integrity and added protection against high humidity or occasional wetting.

(AS/NZS 2924.1)	
PROPERTY	RESULTS
Resistance to Surface wear:	Initial wear not less than 150 cycles; Average wear not less than 350 cycles
Resistance to scratching:	Not less than 2.0 Newtons
Resistance to Dry Heat at 180°C:	No deterioration other than slight loss of gloss/colour

Resistance to Steam:	No deterioration other than slight change of gloss and/or colour
Resistance to Staining:	Reagents Groups 1 and 2 = no visible change. Reagents Groups 3 and 4 = moderate change of colour/gloss
Resistance to Colour Change in Artificial Light*:	Not more than slight colour change in Xenon arc light (minimum) 6 on Blue Wool Scale
Resistance to Cigarette Burns:	No deterioration other than moderate change on gloss and moderate brown staining.

* Laminex Squareform Benchtops have good colour retention and dimensional stability in normal interior applications. However prolonged exposure to sunlight may cause shrinkage and/or some change in colour. Laminex Squareform Benchtops are therefore not recommended for external applications or interior applications with prolonged exposure to direct sunlight.

3rd PARTY CERTIFICATIONS

Laminex Protec+® has been independently certified as food contact safe, providing sustained antibacterial and antifungal protection which does not wash off or leach out of the surface. It is safe for use in food preparation and processing activities and can be in direct contact with food, provided that good hygiene practices are followed.

The Protec+® laminate surface is not a substitute for maintaining a clean work surface. Effectiveness of the antibacterial and antifungal properties is compromised if a layer of dirt or grime prevents direct contact between the bacteria or fungus, and the laminate surface.

HIGH PRESSURE LAMINATES

Laminex Protec+® has been independently tested in accordance with a number of leading standards, including: ISO22196:2011, JIS Z2801 and ASTM G21, which measure antibacterial activity and fungal resistance.

High Pressure Decorative Laminates		
Protec+® Properties		
Attribute	Clause	Values
Antibacterial Activity and Efficacy (24 hours)	JISZ2801:2000 Referred to in ISO 22196	PASS = R value > 2.0 orders of magnitude difference between a treated sample and an untreated control or other inert surface Bacterial Strains tested: Staphylococcus aureus (ATCC 6538P) Escherichia coli (ATCC 8739) Methicillin resistant Staphylococcus aureus (NCTC 12493) Pseudomonas aeruginosa (ATCC 15442) Salmonella choleraesuis (ATCC 10708)
Antifungal (Incubation condition: 30°C for 28 days at 90% relative humidity)	ASTMG21-09	Rating ≤ 1 1 = Traces of growth (less than 10%) 0 = None Fungal Strains tested: Aspergillus niger (ATCC 9642) Penicillium pinophilum (ATCC 11797) Chaetomium globosum (ATCC 6205) Gliocladium virens (ATCC 9645) Aureobasidium pullulans (ATCC 15233)
Compliance with the Demands of Food Contact Materials	Testing methods according to the Rules and Regulations of the EC and EU community	Certificate of Compliance

WHEN SPECIFYING

Surfacing shall be Laminex Squareform Benchtop as supplied by Laminex, Pattern shall be ... in ... sizes and ... profiles.

FABRICATION GUIDELINES

Storage and Handling

Store Benchtop elements with protective paper between each element keeping bulk stocks stacked flat and supported. Avoid exposure to low humidity and extreme temperature. Do not slide elements over one another as this may damage the decorative surface, lift carefully instead. Note the weight specification for the product.

Preconditioning

Prior to installation Laminex Squareform should be allowed to reach moisture equilibrium over a period of 48 hours within the environment of its end use. Remove the packaging to enable this process to occur.

Machine Routing

Vertical spindle moulding machines with tungsten carbide-tipped cutters operating at 18,000 to 22,000 RPM are preferred for edge finishing and for making perfect mitres. Twin fluted cutters with replaceable tips are recommended for this process. Equipment must have the capability to handle the size of the bench top element.

Machine Sawing

Circular saws with 3-4 teeth per 25mm with only a slight set and a saw blade tip speed of 3,000 metre/minute will give a clean cut. Tungsten carbide-tipped blades 300mm to 350mm in diameter and operating at 3,500 to 4,500 RPM are recommended to achieve this. Always cut with face up to minimise surface chipping. For cutting of double-edged post form elements it is recommended to use a saw with a drop down blade (post form saw or scribing saw). The direction of the edge cut must always be towards the post-formed edge and not away from it. A slow feed speed is important in preventing charring of the bench top element when cutting.

It is advisable to consult machine or tooling suppliers for optimum operating settings for routing or sawing equipment.

Hand Tools and Portable Tools

The use of hand tools and portable tools are not recommended for the preparation of benchtop joints. Machine routing and/or machine sawing give superior results.

Cut Outs

All cut outs must have clean chip free edges and a small (2-3mm) internal radius at corners. Ensure that machined

edges of cut outs are sanded smooth and that the top edge of the laminate is arrissed to eliminate stress points. Ragged edges with underside chip out or square cut internal corners provide weak spots for cracking to occur.

Joins

Where two fabricated components are to be joined, lightly sand the ends of each component. Apply a complete spread of silicone adhesive to one surface of the components before clamping them together. Close the join and allow excess adhesive to squeeze out. Secure the join using work top connectors and clean away excess adhesive with appropriate solvent. If shrinkage of adhesive occurs re-apply a second application to the outside of the join and wipe away excess. Whenever possible avoid placement of joins close to sink areas. This can minimise the risk of water damage to joins.

Where external joins are formed with Postformed components it is important to dull any sharp edges using fine sand paper to prevent injury from accidental contact.

