

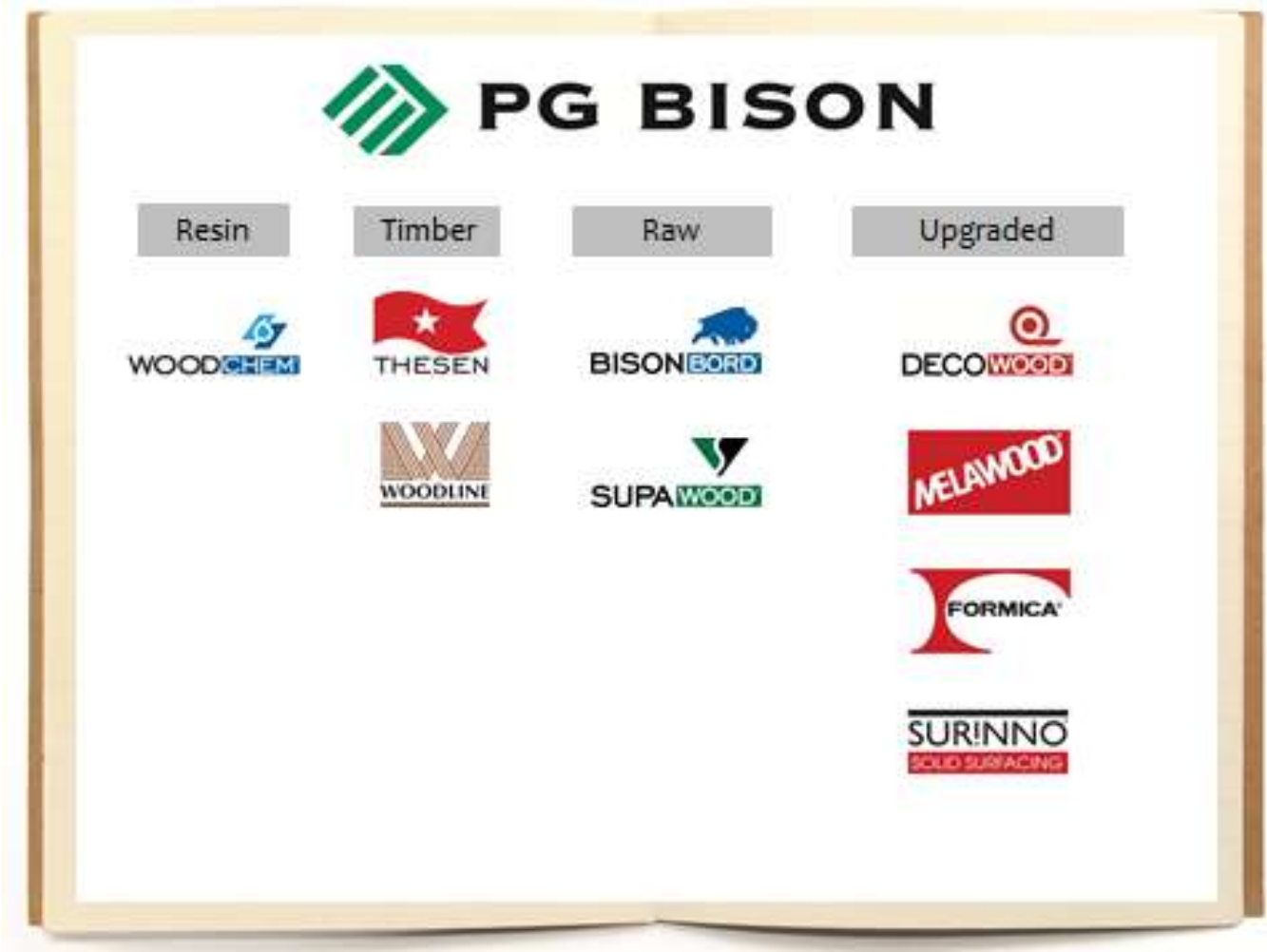
Product Manual



Disclaimer

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Product Overview





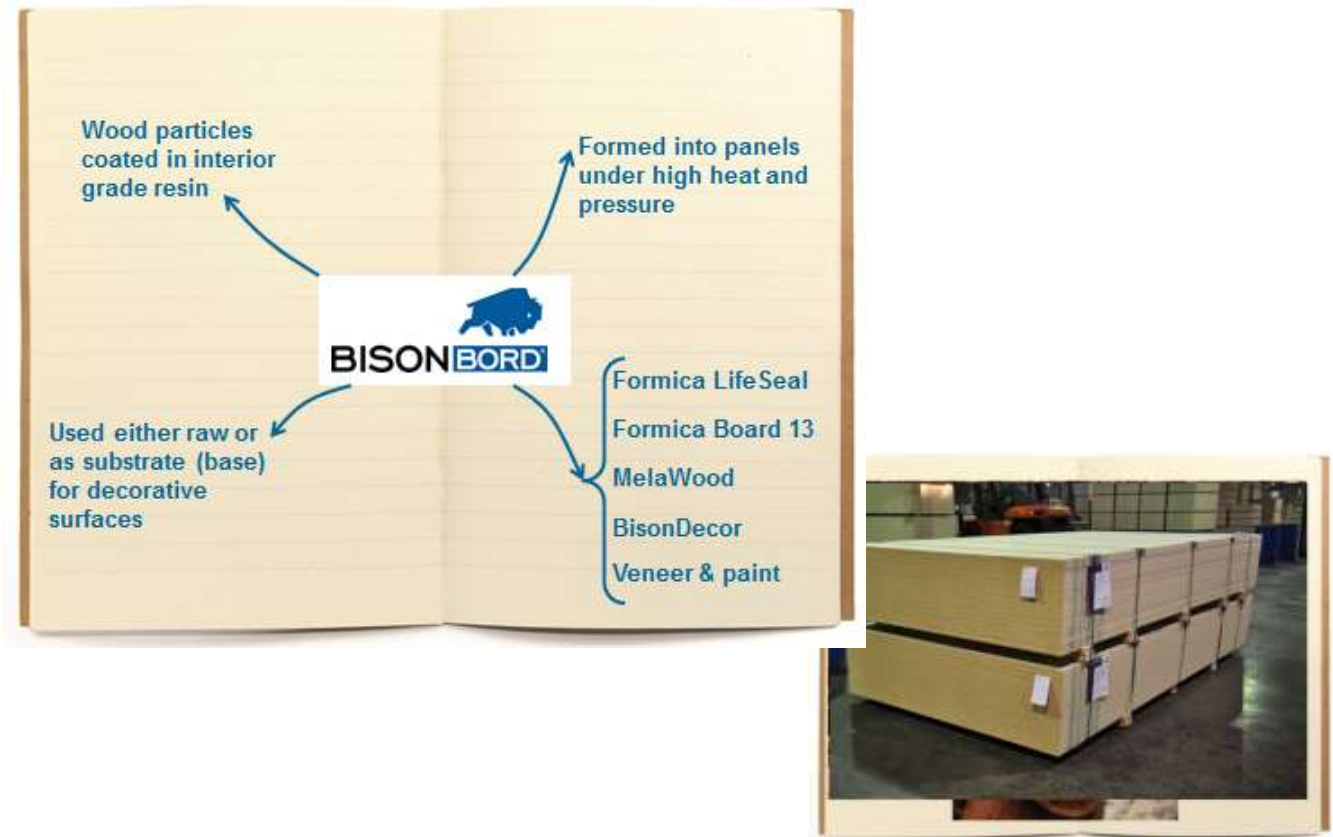
Brand Name:	BisonBord	
Generic Name:	Particleboard; chipboard	
Product Definition:	A panel product consisting of wood particles of various sizes, bonded together with a synthetic resin under heat and pressure	
Composition:	Wood particles (mostly SA pine and some eucalyptus) Binder or synthetic resin (urea formaldehyde [UF]) Additives (wax, hardeners, retarders, accelerators)	
Manufacturing Process:	<p>Logs are:</p> <p>Chipped: Chips ± 19mm x 19mm x 4mm thick</p> <p>Flaked: 0.4 – 0.7mm thickness</p> <p>Dried: 2% Moisture content</p> <p>Screened: Core Flakes: 5 sizes; Face Flakes: 4 sizes</p> <p>Blended with resin: Core ± 7%; Face ± 10%</p> <p>Formed: Flakes air sifted on belt in 3 layers</p> <p>Pressed: 200°C, 30kg/cm², 9 seconds/mm thickness</p> <p>Cooled: 20 minutes in Star Cooler</p> <p>Sanded: 40 → 60 → 80 Grit</p> <p>Sawn: Cut to size</p>	
Specification:	SABS EN 312:3 - 1996 - Boards for interior fitments (including furniture) for use in dry conditions	
Attributes:	High density, smooth surface, good screw holding, low dimensional movement, low tool wear, low formaldehyde emission, low dimensional tolerances, high strength, low deviation to flatness, good creep resistance, good paintability, good machinability, availability and price advantages.	
Applications:	Furniture and fitments for the domestic, office and building industry. Substrate for Formica HPL, veneers, foils (vinyl and paper), printing and painting. (See Typical Application List)	
Linked to:	MelaWood and BisonLam	BisonBord with melamine-impregnated decorative paper surface
	DecoBord	BisonBord with decorative paper foil surface
	Board 13 composite board	BisonBord with Formica HPL or Decon CPL surface
	Formica Lifeseal Worktops	BisonBord with Formica HPL postformed

Veneered board surface
BisonBord with natural timber veneer surface

Sheet sizes: 2,750mm x 1,830mm (9'x6')
3,660mm x 1,830mm (12'x6')

Thickness: 6mm
9mm
12mm
16mm
18mm
22mm
25mm
28mm
32mm
40mm

Variants:	<p>BisonBord Supreme BisonBord Select BisonBord V313</p> <p>BisonBord E1</p> <p>BisonBord MDP</p>	<p>A-grade, superior product Fit-for-purpose, commercial grade Slower swell rate, ideal for higher moisture applications Lower formaldehyde emissions (European standard) Medium density particleboard</p>
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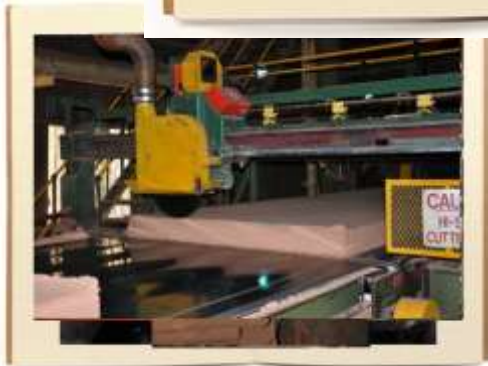
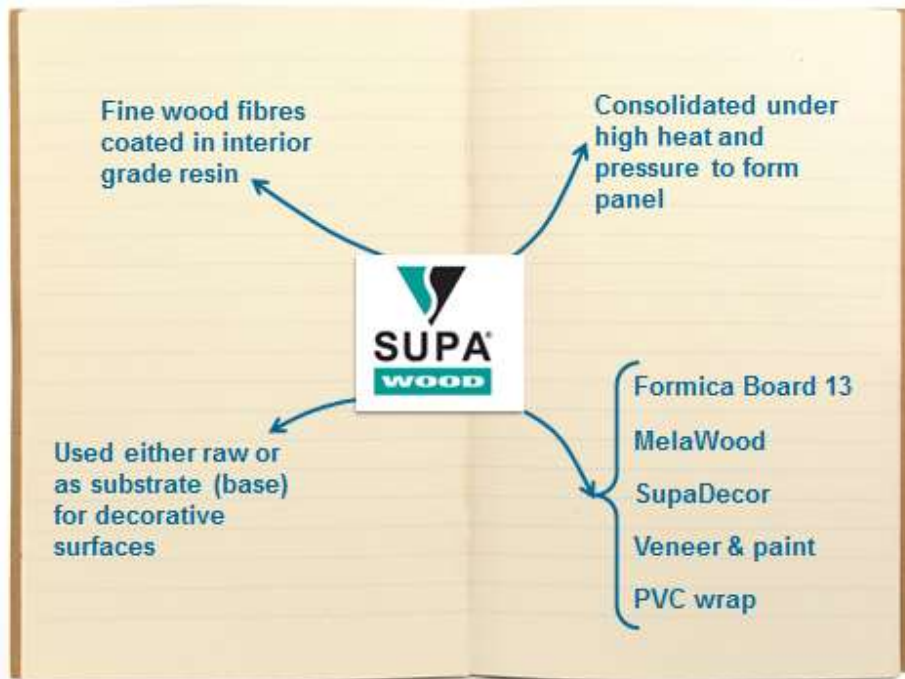
Brand Name:	SupaWood	
Generic Name:	Medium density fibreboard; MDF	
Product Definition:	A panel product consisting of wood fibre, bonded together with a synthetic resin under heat and pressure	
Composition:	Wood fibre (mostly eucalyptus aka gum tree) Binder or synthetic resin (urea formaldehyde [UF]) Additives (wax, hardeners and retarders)	
Manufacturing Process:	Logs are:	
	Chipped:	Chips ± 19mm x 4mm thick
	Washed:	Sand removed)
	Digested:	Softened by steam 170°C @ 9 Bar pressure
	Refined:	Chips rubbed between discs to form fibres
	Blended with resin:	Resin added in blowline
	Flash Dried:	Excess moisture removed to 12-18% MC
	Cyclone:	Air extracted from fibres
	Stored:	Fibre bin storage area, feeding to formers
	Formed:	Fibres spread on screen belt conveyor
	Pressed:	150°C, 72kg/cm ² , 9 seconds/mm thickness
	Cooled:	20 minutes in Star Cooler
	Sawn:	6.4M x 1.83M cut to 3660/2745/2135 x 1830
	Sanded:	40 → 60 → 80 → 100 Grit
Specification:	SABS 540:1 - 1991 Fibreboard products, Part 1: Uncoated Fibreboard	
Attributes:	High density, smooth surface, good screw holding, low dimensional movement, low tool wear, low dimensional tolerances, high strength, low deviation to flatness, high internal bond strength, excellent machinability, good creep resistance when surfaced, good moisture resistance, excellent paintability, availability and price advantages.	
Applications:	Furniture and fitments in the domestic, office and building industry. Substrate for Formica HPL, veneers, foils (vinyl and paper), printing and painting. (See Typical Application List)	
Linked to:	MelaWood and SupaLam	(SupaWood with decorative Melamine-impregnated paper surface)

DecoBord	(SupaWood with decorative paper foil surface)
Board 13 composite board	(SupaWood with Formica HPL or Decon CPL surface)
Veneered board	(SupaWood with natural timber veneer surface)

Fabrication: Similar to solid wood

Sheet sizes: 2,750mm x 1,830mm (9'x6')
3,660mm x 1,830mm (12'x6')

Thickness: 12mm
16mm
18mm
22mm
28mm
32mm





Brand Name: DecoBord (with BisonBord or SupaWood substrate)

Generic Name: Foil boards

Product Definition: A composite board consisting of a layer of melamine coated decorative paper, bonded to both sides of a high quality BisonBord or SupaWood using a thermosetting adhesive (U.F.) in a hot pressing operation.

Composition: Melamine coated decorative paper applied to two sides of Bisonbord and Supawood.

Manufacturing Process:

Gluespreader:	65 GSM U.F. adhesive 2 sides of substrate
Layup:	Apply paper foil to 2 sides of substrate
Press:	130°C/15 seconds
Inspection:	Internal standards

Specification: **SABS 929 : 1986** - Plywood and Composite Board

Attributes: High density substrate, balanced construction, range of colours, availability and price advantages, ease of fabrication.

Applications: Domestic and office industry.
Low traffic, light duty, vertical interior applications.
Furniture carcasses, door and drawers.
Caskets and coffins



Handling and Fabrication of Panel Products

Handling and Storage

- Always store boards in racks or on dunnages off the floor
- Dunnages should be of uniform thickness, clean and dry
- Dunnages should be set with approximately 1 metre or less spacing between them to prevent sagging
 - Sagging may result in permanent bowing
- Dunnages must be aligned vertically when used to support multiple stacks, including on vehicle load beds
- Limit stacking to 4 or 5 bundles for ease of handling (Always apply the legal requirement for stack height restrictions)
- Storage area should always be clean and dry
- Store boards under cover, in a well-ventilated, dry area, away from direct sunlight and work area
- Avoid extreme fluctuations in temperature and humidity conditions
- Avoid getting boards wet
- Use a packing board on top of each stack to minimize damage and bowing.
- Allow board to acclimatise to local climate conditions before use (minimum 48 hours) to minimize dimensional movement

Sawing

- Always use tungsten carbide tipped saw blades
- A triple chip teeth saw blade will provide the best results
 - Rough cut and fine cut performed simultaneously
 - An alternative bevel saw blade will also yield good results, but will have a shorter cutting life
- For optimum results and to perform a chip-free finish, a scoring blade should be used together with the main saw blade
 - Scoring blade cutting depth = 2mm-3mm maximum
- Saw blades with a positive hook/rake angle are recommended ($\pm 15^\circ$)
- The saw blade should protrude only 10-20mm maximum above the work piece
- The decorative side of a panel should always face towards the entry side of the saw blade teeth, eg.
 - Table/bench saw = face up
 - Portable electric circular saw = face down
 - Jig saw = face down
- Change saw blades regularly and have them sharpened as soon as chipping starts
 - Working with blunt saw blades will shorten their lifespan
- Use efficient dust removal system
- Common sawing problems:
 - Saw Blades: Not round, teeth out of index, warped body, improper clearance, improper bore (too big, not centered, oval), poor design, poor sharpening, incorrect blade, resin on teeth (burnt resin from pausing whilst cutting)
 - Collars: None used, dirt buildup, mismatched, warped or damaged, incorrect bore

- Motor: Bent, worn or out of round arbor, loose bearings, not enough horsepower
- Other: Fence binding, saw cutting at wrong depth, mismatched RPM and feed rate, vibration and poor work support
- Always use safety equipment and follow safety procedures.
- The saw blade diameter and number of teeth is dependent on the speed of the machine manufacturer or saw blade supplier's recommendations
- The peripheral cutting speed for raw BisonBord is 50 – 80 metres per second, SupaWood is 60 – 100 metres per second and Melawood is 60 – 80 metres per second

CUTTING SPEED								
RPM ∅	1500	2000	2800	4500	5600	8000	10000	12000
100	8	11	15	24	29	42	53	63
150	12	16	22	35	44	63	79	94
200	16	21	29	47	59	84	105	
250	20	26	37	59	73	105		
300	24	32	44	71	88			
350	28	37	51	82	103			
400	32	42	59	94	117			
450	36	47	66	106				
500	40	52	73	118				

eg. BisonBord 50-80 m/s : 300 ∅ x 60 teeth (4500 RPM)

Machining: (Routing/Spindling)

- Use only tungsten carbide tipped tools
- Parameters are the same as for cutting including tool design, tool speed, feed rate, machine process control and quality of cutting equipment
- Multiple passes may be required to remove large volumes of material (e.g. width or depth of cut)
- Use efficient dust removal system
- BisonBord and SupaWood edges are suitable for postformed or softformed profiling as well as grooving for T-mouldings
- Two fluted cutters are preferable and offer extended life, high quality and are easily sharpened
- Common routing problems:
 - Bit breakage, worn collets, poor tool design, poor sharpening and improper use
- Always use safety equipment and adhere to safety procedures
- Consult your tool supplier for correct tools and fabrication specifications

Screwing

- Always use straight shank screws (tapered screw may split the boards) and lower screw holding power will be experienced.

- Twin-fast, double-threaded, chipboard and metal screws are most suitable. (Self-boring screws are the latest technology).
- Always drill (never punch) pilot holes.
- Pilot holes to be 2mm deeper than screw length. Tungsten tipped drills are best, however, high speed steel drills may be used.

Screw Gauge (mm)	Bisonbord	Supawood
	Pilot Hole (mm)	Pilot Hole (mm)
2.0	Nil	Nil
3.0	1.2	2.5
4.0	1.8	3.0
5.0	2.5	3.8
6.0	3.0	5.0
7.0	3.5	6.0

- Do not use screws larger than 7.0mm. Rather use longer screws.
- Screws should not be closer than 6mm from the edge or 30mm from the corners of components.
- Never over-tighten screws.
- Never use a hammer for driving in screws.

Nailing and Stapling

- Hand nailing is not recommended.
- Machine nailing is possible using resin coated nails with a maximum thickness of 1.8mm.
- Nailing should never be closer to the edge than 6mm or closer than 30mm from a corner.
- Pneumatic stapling using resin coated staples yield excellent results for mass production.
- Supawood must be stapled in a zigzag fashion into the edge of a panel to prevent splitting.
- Always employ and maintain safety procedures.

Joining

- Bisonbord and Supawood may be joined together using Mitre, Tennon, Rabbet and Dowel joint. Dovetail joints is possible with Supawood.
- Routed joints may be made into the surface of Bisonbord and Supawood.
- RTA (Ready to Assemble) fastener systems are ideally suited to Bisonbord.
- Lamello biscuit joining may be carried out in Bisonbord and Biscuits should never be closer than 6mm from an edge or 25mm from a corner.
- Dowling is often used for joining Bisonbord. Use fluted, beech dowels with the hold drilled 0.4mm deeper than the dowel length. Glue the entire joint surface as the dowels are for guiding only. High speed or TCT drills are suitable for dowel drilling.

V-Grooving: (Mitre-folding)

- Specialised V-Grooving machines are available and should be equipped with Tungsten tools.

- Diamond tipped scribing tools are recommended for V-Grooving where rigid surfaces are used (e.g. Formica, Melawood and Deccon).
- The groove is cut through the Bisonbord particleboard only when processing a Vinyl (P.V.C) surface material. The Vinyl will then form a hinge when gluing and folding the components together.
- A plastic tape, such as Mylar, is applied to melamine surfaced components e.g. Formica, Deccon and Melawood. This tape now forms the required “hinge” for gluing and folding.
- Use a P.V.Ac adhesive for bonding and clamp until the adhesive is cured.

Laminating of Bisonbord and Supawood

- Bisonbord is suitable for lamination using any Veneer, P.V.C. or paper foil, Formica HPL or Deccon CPL.
- Pressing procedures:
 - Veneer: 150°C for 25 seconds at 2.8 bar pressure.
 - Foils: 130°C for 15 seconds at 2.8 bar pressure.
- Foil weight should be 60g/m² (min) for flat pressing and from 30g/m² for thermal laminators.
- UF Resin application weight ± 120gsm and PVA adhesive ± 80 gsm for Veneers and ± 65 gsm for UF and ± 50 gsm for PVA for paper. (Use minimum adhesive for paper to avoid creasing).
- Use 20-50% longer pressing time for Oak Veneers.
- Die stamp (Hot stamp) foiling is suitable for Bisonbord.
- P V C foils (Renolit) require the use of VAE adhesive.
- Formica and Deccon Laminates are bonded using PVA or contact adhesive.
- Always follow the adhesive manufacturer’s instruction.
- Always use a matching balancing material when bonding onto Bisonbord or Supawood in order to prevent bowing, warping or chipping.

Edge Treatment

- In most particleboard applications it is desirable to treat exposed edges to match the finished flat surface.
- Materials used for edge treatment includes:
 - Formica HPL, Deccon CPL, Solid Timber, Veneer, Soft or Rigid PVC, Melamine Foils or Fillers.
 - Formica HPL, Solid Timber and Rigid PVC edging may be regarded as high impact edging and are suitable for high traffic areas.
 - Deccon CPL, PVC, Veneer and Paper Foil edging are generally used for cupboards, doors, drawers and shelves.
 - Hotmelt, PVA, UF or Neopreen Contact Adhesive are suitable for bonding edging material to Bisonbord and Supawood, however, the adhesive must be selected in accordance with the available application method.

Adhesives

- Adhesives should be carefully selected in accordance to the fabrication method employed, e.g. Hot Pressing, Cold Pressing, Block Pressing, Single Daylight, Edgebanding Machine, Hand Application etc.
- Formica manufacturer’s or adhesive supplier’s specifications and instructions must be very strictly adhered to in order to prevent a poor bond and/or delamination.

- The following adhesives are generally used:
 - Emulsion Adhesives, e.g. PVA, PVAc or EVA
 - Thermosetting adhesives, e.g. Urea Formaldehyde (U.F.)
 - Contact or reaction adhesives, e.g. Epoxy, Neopreen, etc.
 - Hotmelt adhesives, e.g. Thermoplastics and Polyamides.

Painting and Finishing

- Bisonbord is supplied with a 90 grit surface finish.
- Supawood is supplied with a 100 grit surface finish.
- A recommendation from the paint supplier on a suitable compatible primer must be obtained.
- Bisonbord and Supawood may be painted with any type of paint, but the surfaces should be sanded to 150 or 180 grit in order to obtain a professional finish.
- Cellulose or Catalyzed lacquers are most often used, but enamels, Esters and Urethanes are also suitable, depending on requirements.
- Paints and primers must be applied strictly in accordance with manufacturer's instructions.
- Water based lacquers are also available and relative information must be obtained from suppliers.
- Veneered Bisonbord (Bisonply or Supaply) may be finished with a suitable varnish, applied in two or three coats with mild sanding between coats.
- Cellulose, Catalyzed or Urethane varnishes are recommended. Stains or Stain Varnishes may also be applied with excellent results.
- Oiling and waxing is only recommended for specialized applications.
- Bisonbord and Supawood must be treated (painted) on both sides with similar paints or varnishes in order to prevent bowing or warping.
- Edges must receive a compatible sealant with a high solids content before finishing in the normal way.
- Consult your paint supplier regularly for advice on the latest technology, product and techniques to achieve the desired surface and edge finishes.

Comparison between Particleboard and Medium Density Fibreboard (MDF)

A. Particleboard (Bisonbord)	
Advantages	Disadvantages
Price	Moisture resistance
Availability	Surface profiling
High density	
Resistance to creep (shelving)	
Screw holding power	
Resistance to splitting	
Ease of fabrication	
Three layer balanced construction	
Smooth surface finish	
Paint ability	
Edge	
B. Medium Density Fireboard (MDF) (Supawood)	
Advantages	Disadvantages
High Density	Price
Screw holding	Availability
Ease of Fabrication	Resistance to creep
Homogeneous construction	Resistance to splitting
Paint ability	Dust control
Surface edge profiling	
Membrane pressing	
Moisture resistance	



Formica High Pressure Laminate (HPL)

Brand Name: Formica

Generic Name: High Pressure Laminate; HPL

Product Definition: A sheet consisting of layers of paper that are impregnated with thermosetting resins and bonded together by means of very high heat and pressure.

Composition: A) Melamine impregnated alpha-cellulose decorative paper in plain colours, patterns and wood grains with a similar clear overlay for protection against wear and scuff.
B) Phenolic impregnated sodium kraft paper for the core of a laminate (5 sheets are required per millimeter thickness.)

Manufacturing Process:

Resin Manufacture: Melamine and Phenolic resins are produced under heat and pressure in reactors.

Impregnation: Decorative papers are saturated in Melamine Resins, brown kraft paper is saturated in Phenolic resin. The impregnated papers are then dried, sheeted and stored.

Pressing: Treated papers (surface and core are collated in a book form and pressed together with press plates and/or release papers to provide the surface finish, under high heat (150°C) and pressure (100 kg/cm²)

Cutting: Laminates are trimmed to standard sizes.

Sanding: Laminates are sanded to calibrate thickness and to promote bonding.

Inspection/Packing: Laminates are inspected to eliminate appearance defects. Laminates are packed, 6 per pack and wrapped in clear polyethylene.

Quality Control: Quality control tests are conducted after every operation.

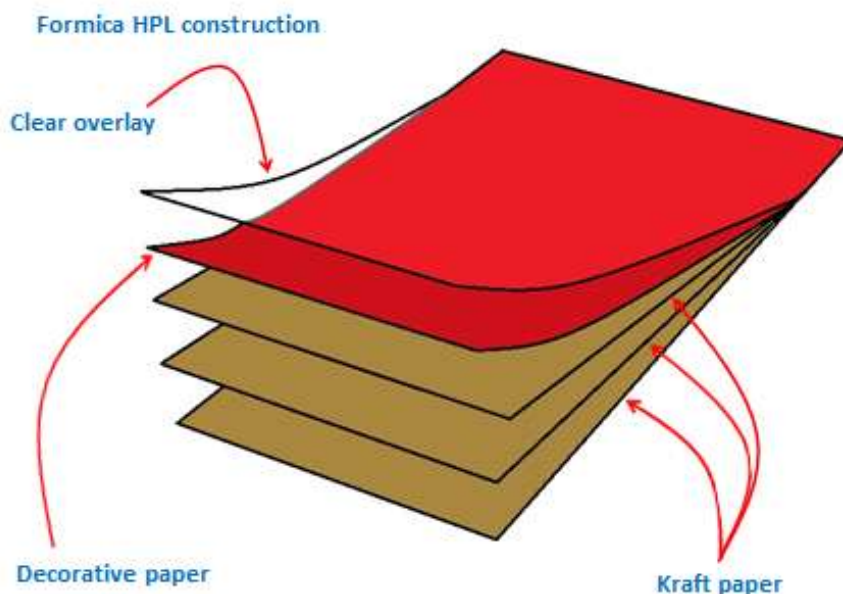
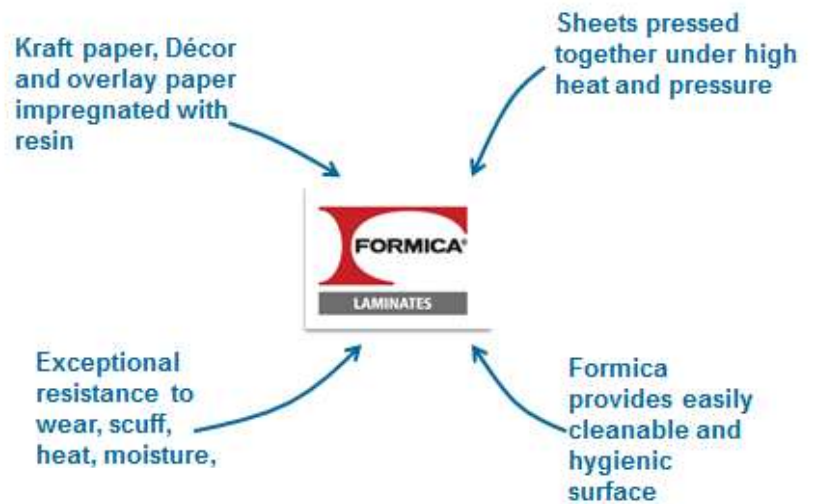
Quality Assurance: Every batch of laminates is subjected to Q.A. testing.

Specifications: SABS ISO 4586 : 1995. High Pressure Laminates. Sheets made from thermosetting resins.

Attributes: Pre-finished decorative surface high resistance to mechanical, chemical, heat and environmental damage. May be bonded to a variety of substrates using a range of adhesives. Postformable, ease of fabrication. Availability and price advantages.

Applications: Interior and exterior, horizontal and vertical, light to heavy duty applications. May be bonded to almost any substrate. Typical applications include: Counters, desktops, tabletops, wall panelling, lift cladding, bookcases, kitchen, office and bathroom units as used in the kitchen, office, building, transport, education, entertainment, medical, food and hotel industries.

Linked to: Board 13 Composite Boards, SolidCore, Lifeseal Worktops, Writing Surfaces and Access Flooring.





Brand Name:	MelaWood; BisonLam and SupaLam
Generic Name:	Melamine faced board; MFB; low pressure board; one-shot board
Product Definition:	A composite board consisting of melamine-impregnated decorative paper consolidated, or fused, under heat and pressure onto both surfaces of a BisonBord or SupaWood substrate.
Composition:	Melamine-impregnated decorative paper ($\pm 0.15\text{mm}$ thickness) Substrate of either BisonBord or SupaWood
Manufacturing Process:	Brush: Boards cleaned (dusted) Layup: Pre-impregnated decorative papers laid up on both sides of a board on a conveyor belt (mechanically or manually) Press: 150°C , 35MPa , 40 seconds Trimming: Automatic edge trimming (all 4 edges, top and bottom) Inspection: to ISO based internal standards Packing: Strapped between packing boards, 30/Stack
Specification:	SABS 1763 : 1998 Decorative Melamine Faced Board
Attributes:	High density substrate, excellent surface performance characteristics (mechanical, chemical, heat resistance), wide colour range, decorative aesthetic appeal, durable, low maintenance, easy to clean, competitively priced, ease of fabrication.
Applications:	Building construction, commercial (office), domestic and kitchen furniture. Interior vertical and low wear, low traffic, horizontal applications. (Not for kitchen and office desktops). Wall panelling, partitioning, bulkheads, toilet cubicles, office furniture, filing cabinets, shelving, built-in-cupboards, wall units, kitchen cupboards, doors and drawers etc.

FABRICATION OF FORMICA (HPL) AND MELAWOOD, BISONLAM, SUPALAM (MFB)

- General: Allowances must be made for dimensional movement during fabrication and installation.
- Allow 3mm/metre for expansion and contraction.
 - Do not fabricate sharp internal corner (produce corners with a radius of at least 6mm).
 - Drill holes slightly larger than the screw shank.
 - Technical fabrication information brochures are available upon request.
- Transport:
- Lift, do not slide laminates.
 - Slightly bow laminates in the width to carry horizontally.
 - Laminates may be rolled, except metallics,
- Storage:
- Normal climate conditions, ideally 50-60% RH.
 - Enclosed warehouses, protected from water.
 - Store flat on pallets or supported at 60° angle.
 - Store face to face.
- Conditioning:
- Laminates and substrates should ideally be stored at 20-25°C at 50-60% RH for 10 days prior to manufacturing to minimize dimensional movement.
 - Unconditioned materials may lead to bowing and warping.
- Balancing:
- All Composite Boards must be balanced by using a similar backer to the face material.
 - Unbalanced constructions may lead to bowing and warping.
- Bonding:
- Formica HPL may be bonded to almost any substrate using a range of adhesives.
 - Always adhere to the laminate, substrate and adhesive manufacturers instructions.
 - Proper bonding requires:
 - 1) Wetting of two sides.
 - 2) Correct speed.
 - 3) Correct heat.
 - 4) Correct pressure.

Cutting:

- Formica surfaces are harder than natural timber due to high quality Melamine resins used.
- Tungsten tipped tools (TCT) must be used for cutting, routing, drilling, edge trimming, etc.
- Use of incorrect tools will result in breaking, splintering, chipping and lifting of Formica surfaces.
- Chipped edges and hairline cracks will result in stress cracks.
- Use felt or grooved machine tables to prevent scratches.
- Laminates may be scribed and snapped like glass.
- Use fine-toothed hand saws, cutting from the decorative surface. Sanding after cutting may be necessary.
- Portable electric circular saws or Jig saws may be used for straight or curved cuts.
- Always cut towards the decorative surface (surface facing upwards) when using a Table or Beam saw or face down when using a Portable circular saw or Jig saw to prevent chipping of the surface.
- Ensure that the work piece is well clamped down.
- Cutting with a straight fence or guide is recommended.
- The height setting of the saw blade above the work piece is essential and should be between 10 and 30mm.
- The best performance is achieved using a combination type “triple chip” saw blade (AKA “Trapesium”).
- Saw blades should be matched to the equipment being used.
- Typical saw blade for cutting laminates:

Combination saw	Triple chip.
Pitch	10-15mm
Rake	Positive (10°)
Revolutions	4500 RPM
Cutting Speed	50-80 m/sec
Feed Speed	10-30 m/min
Saw Blade	300 diameter, 60 teeth
- Peripheral cutting speed recommendation (Metres/second):

Softwood	60-100
Hardwood	60-100
Veneer	70-100
Plywood	50-80
Blockboard	50-90
Bisonbord	50-80
Supawood	60-100
Hardboard	50-80
Formica	50-80
- Trimming of Laminates overhand (e.g. edging) may be carried out with a file, planer or portable hand router.

Drilling:

- Twist drills with a cut-point angle of 60-80° as used in the plastics industry is most suitable.
- A slow feed speed is recommended, high speed steel (0.8 m/sec) and Tungsten (1.6 m/sec).
- Always place a hardwood support underneath to prevent chipping.

Edge Treatment:

High Impact Edging:
Other Edging

Rigid P.V.C. Solid Timber or Polyurethane.
Formica HPL, Thin P.V.C., T-Section P.V.C

Adhesives:

- Adhesives should be carefully selected in accordance to the fabrication method employed e.g. Hot Pressing, Cold Pressing, Block Pressing, Single Daylight, Edgebanding Machine, Hand Application etc.
- Formica manufacturer's or adhesive supplier's specifications and instructions must be very strictly adhered to in order to prevent a poor bond and/or delamination.
- The following adhesives are generally used:
 - Emulsion adhesives, e.g. PVA, PVAc or EVA
 - Thermosetting adhesives, e.g. Urea Formaldehyde (U.F.)
 - Contact or reaction adhesives, e.g. Epoxy, Neopreen etc.
 - Hotmelt Adhesives, e.g. Thermoplastics and Polyamides.

Painting:

- Clean surface with a solvent and wipe dry.
- Sand with 180-240 grit using Orbital Sander.
- Dust and wipe clean.
- Apply Melamine Primer PMP1 as supplied by Plascon.
- Spray paint using Epoxy paints, Acrylic Enamels or Duco.



LifeSeal Worktops

Brand Name:	Formica Lifeseal Worktops
Generic Name:	Postformed Worktops
Product Definition	A composite panel consisting of a Formica High Pressure Laminate bonded to a Bisonbord Particleboard substrate with a suitable laminate backer. One or two long edges is postformed to specified radi.
Specification:	Formica HPL – HG/P : SABS ISO 4586 : 1997.
Bisonbord:	SABS – EN – 312-5 : 1996.
Composite Board:	SABS 929 : 1986
Attributes:	Pre-finished decorative surface, High Resistance to mechanical, chemical heat and environmental damage. Ease of fabrication and installation, moisture resistance surface, backer and front edge. Working surface, hygienic, large colour range. Ease of cleaning and maintenance.
Applications:	Interior horizontal, heavy duty application in domestic office and building Industries. Kitchen worktops, laboratory worktops, office desk tops, reception counters, vanity tops, table tops.
Linked to:	Formica HPL, Decon CPL. Composite Boards (B13), Melawood MFB, Decon door and drawer frontals
Product:	32mm quality BisonBord core <ul style="list-style-type: none">• LifeSeal wax strip• Brown Spantex backer• Edging strip• Branded shrink wrapping• Care & installation guide



Surinno Solid Surfacing

Brand Name: Surinno

Generic Name: Solid Surfacing

Product Definition:

- Composition:
- A) Melamine impregnated alpha-cellulose decorative paper in plain colours, patterns and wood grains with a similar clear overlay for protection against wear and scuff.
 - C) Phenolic impregnated sodium kraft paper for the core of a laminate (5 sheets are required per millimeter thickness.)

Manufacturing Process:

Resin Manufacture: Melamine and Phenolic resins are produced under heat and pressure in reactors.

Impregnation: Decorative papers are saturated in Melamine Resins, brown kraft paper is saturated in Phenolic resin. The impregnated papers are then dried, sheeted and stored.

Pressing: Treated papers (surface and core are collated in a book form and pressed together with press plates and/or release papers to provide the surface finish, under high heat (150°C) and pressure (100 kg/cm²)

Cutting: Laminates are trimmed to standard sizes.

Sanding: Laminates are sanded to calibrate thickness and to promote bonding.

Inspection/Packing: Laminates are inspected to eliminate appearance defects. Laminates are packed, 6 per pack and wrapped in clear polyethylene.

Quality Control: Quality control tests are conducted after every operation.

- Quality Assurance: Every batch of laminates is subjected to Q.A. testing.
- Specifications: SABS ISO 4586 : 1995. High Pressure Laminates. Sheets made from thermosetting resins.
- Attributes: Pre-finished decorative surface high resistance to mechanical, chemical, heat and environmental damage. May be bonded to a variety of substrates using a range of adhesives. Postformable, ease of fabrication. Availability and price advantages.
- Applications: Interior and exterior, horizontal and vertical, light to heavy duty applications. May be bonded to almost any substrate. Typical applications include: Counters, desktops, tabletops, wall panelling, lift cladding, bookcases, kitchen, office and bathroom units as used in the kitchen, office, building, transport, education, entertainment, medical, food and hotel industries.
- Linked to: Board 13 Composite Boards, SolidCore, Lifeseal Worktops, Writing Surfaces and Access Flooring.



TERMINOLOGY

ABRASIVE MATERIAL	A mineral substance coating on a sanding belt that abrades or sands the board by removing material.
ADDITIVE	Any special material incorporated in a panel in the course of manufacture to impart special properties. The term includes preservative water repellents and fire retardants, but not binders.
ADHESIVE	A substance capable of holding materials together by surface attachment. The term is used to cover the bonding of sheet material and is synonymous with glue. The term “binder” is used for materials concerned in the manufacture of particleboard.
BACKER	A non-decorative laminate used on the back of composite panel constructions to protect the substrate from changes in humidity and to balance the panel construction.
BALANCED CONSTRUCTION	A composite panel construction that will not warp, cup or bow when subjected to uniformly distributed moisture changes.
BINDER	The synthetic resin or adhesive used to hold materials together by surface attachment.
BLENDING	The application of binder and additives to particles in the manufacture of particleboard.
BLOWN BOARD (BLOW)	A localised delamination caused by steam pressure build-up during the hot pressing process. Steam may result from excessive moisture, excessive glue spread or high press temperatures.
BOW	The deviation flatwise from a straight line stretched parallel to the length of the panel.
CALIPER	An instrument for measuring diameters or thickness. Also used as the term describing board thickness.
CAUL	A flat metal plate on which wood particles are formed into mats, conveyed and pressed.
CAULLESS SYSTEM	A manufacturing process in which particle mats are formed and conveyed on moving flexible plastic sheets and then pressed directly between the press platens without the use of caul plates.
CERTIFICATION AGENCY	An accredited independent testing agency that monitors the required testing and evaluation programme to ensure conformance with applicable product standards.

CHATTER	A wavy condition across the width of a panel caused by sanding. These markings are parallel to one another between 6mm and 12mm apart and perpendicular to the sander grit markings. Sometimes they can be felt, but they can always be seen.
CHIP LOAD	Bite per tooth, or the amount of material removed by each cutting tooth as it goes through the material being cut.
CHIP OUT	Along the top or bottom face edges, flakes are removed or torn out of the surface, especially during cutting or routing.
CLIMB CUTTING	Machining with the cutting tool rotating in the same direction as the material being cut is travelling.
CONCENTRATED LOAD (CL)	A load applied to a single point on a shelf span or floor span.
CORE	The centre layer in a composition (multi-layered) board panel.
CORE SEPARATION	Actual delamination of the core normally of the centre line caused by steam pops (blown board) or poor glue distribution and cure.
CROWNED BOARDS	The centre of the width of a sanded board is thicker than the two long edges of a sanded board.
CUP	Deviation flatwise from a straight line stretched across the width of the panel.
DEFLECTION	Downward bending of a board between supports when a load is applied such as a shelf or floor panel. Usually measured in millimeters and is greater in the centre of the span.
DELAMINATION	An actual separation of the panel's face layer from the core or a laminate from a substrate.
DENSITY	The weight of a panel as measured in kg/m ³ .
DEPRESSION	A defect in a finished panel that appears as a concave area on the surface.
DESICCATOR TEST (FTM 1-1983)	A common quality control test performed by particleboard plants to monitor formaldehyde emissions from the panel product.
DIRECTION OF GRAIN	As applied to aminoplast laminates. A sanded grit pattern which can be seen on the laminate back and is usually parallel with a printed wood-grain pattern (always along the sheet length).

DRY BULB TEMPERATURE	The temperature of the air indicated by any type of thermometer not affected by the water vapour content or relative humidity of the air.
DRY FACE	Condition when the outer face fines or flakes readily fall or flake off. Similar to paint flaking from a wood substrate.
DUBBING OFF THE END	A narrow tapered condition on one end of a sanded panel. This taper can be detected visually.
DULLING EFFECT	Incompatible solvents showing up as a dull spot on a finished panel.
EDGE SNIPE	A narrow tapered condition along the long edge of a sanded panel. This taper often cannot be detected visually.
EDGE TAPE EASE	The amount of bevel along the edge of edge taped shelving.
FEED RATE	The rate in which material passes a cutting tool, measured in metres per minute (m/min.).
FILLER	A high solids finishing material used to fill tiny voids or pits in board surfaces.
FLAKE RAISE	Face flakes that are raised above surrounding flakes appearing as a rough surface, usually caused by excessive absorption of moisture.
FLAME SPREAD	Term relating to spread of a flame along the surface of a material, expressed in numbers or letters and used in describing interior finishing requirements for building codes.
FLOWBACK	Refers to the degree a material will compress before penetration of a cutting tool occurs.
FOILS	Cellulose papers weighing between 40 and 140 grams per square meter untreated, the papers may be impregnated with melamine thermoplastic resins or left untreated.
FORMER	Machine that forms the furnish into a particleboard mat prior to hot pressing. It may use mechanical or air classification methods of forming the mat.
FORMALDEHYDE	A reactive organic compound CH_2O , used in the manufacture of binders such as urea formaldehyde (UF).
FREE FORMALDEHYDE	Uncombined or unreleased formaldehyde available for release or emission from a panel.
FURNISH	The blended particles, binders and additives ready for the board-forming process.

GRIT SIZE	Refers to coarseness of an abrasive material on a sanding belt. The lower the grit label, the coarser the abrasive material.
HARDNESS	A measure of resistance to indentation of the board surface and is related to board density. Value stated in kg's.
HEAT TRANSFER FOILS	A panel coating system that involves the transfer of a complete system from a carrier film to a substrate by means of heat and pressure.
HOMOGENEOUS BOARD	A particleboard product manufactured with the same kind, size and quality of particle throughout its thickness.
HOOK OR RAKE ANGLE	Angle on a cutting tool affecting ease in which the tooth penetrates the material being machined.
HPL	High pressure laminate. A sheet material formed from multiple layers of kraft paper saturated with phenolic resin; a decorative layer of paper saturated with melamine resin; and a very thin top sheet of paper heavily saturated with a melamine resin. Fused together in the hot press under high temperature and pressure to produce rigid thermosetting sheet material.
IMPACT RESISTANCE	Ability of a material to withstand sharp blows or violent contact.
INSULATION VALUE	Ability of a material to resist heat flow stated as R or thermal resistance value.
INTERNAL BOND STRENGTH	An overall measure of the board's integrity, illustrating how well the core materials are bonded together. Tested by applying tension perpendicular to the panel surface. Value stated in Megapascals (Mpa).
KERF	A slot made by a sawblade. The width of the saw cut.
LAMINATE	(n) A product made by bonding together two or more layers of material. (v) To unite layers of material with adhesive.
LINEAR EXPANSION	A measure of growth along length and width of the board when exposed to condition from low to high humidity stated in percentages (%).
MACHINE DIRECTION	The panel orientation that corresponds with the direction that the product moved through the machine that manufactured or machined it. Also referred to as the parallel direction.
MAT-FORMED PARTICLEBOARD	A particleboard in which the coated particles are formed into a mat before being hot-pressed.

MELAMINE FORMALDEHYDE (MF)	Thermosetting resin with exterior capabilities commonly used as a saturating resin for paper laminates.
MODULUS OF ELASTICITY (MOE)	A measure of the board's resistance to deflection or sagging when loaded as a simple beam. Value stated in Megapascals (Mpa).
MODULUS OF RUPTURE (MOR)	An index of the maximum breaking strength of the board when loaded as a simple beam. Value stated in Megapascals (Mpa).
MOISTURE CONTENT (M.C.)	The amount of water in wood and expressed as a percentage of dry weight.
MOTTLING EFFECT	An irregular appearance in an area or entire surface of a finished board due to heavy application of finishing material, poor drying or incompatible solvents. Also known as "Orange Peel".
MELAMINE UREA FORMALDEHYDE (MUF)	UF resin fortified with melamine. See MELAMINE FORMALDEHYDE, UREA FORMALDEHYDE.
OVERLAY	A thin layer of paper, plastic, film, metal foil, or other material bonded to one or both faces of a panel.
PARTICLEBOARD PRESS	Hot press that consolidates the particleboard mat into a board and cures the resin binder under heat and pressure.
PARTICLEBOARD PREPRESS	A cold press following the former that helps consolidate the particleboard mat prior to the hot press. Always seen in caulless systems.
PERFORATOR TEST	A formaldehyde test developed in Europe as a plant quality control test. It extracts free formaldehyde from particleboard with toluene (European test No. EN.120)
PHENOL FORMALDEHYDE (PF)	A water resistant, thermosetting resin system commonly used to bond softwood, plywood, oriented strand board (OSB) and exterior particleboard (ANSI A208.1 Type 2).
PITS	Tiny voids on the board surface between fines or flakes.
PLATEN	A part of a press consisting of a rigid metal plate, usually heated, for exerting pressure on the mat.
POOR ADHESION	A condition that develops when a finish or laminate is applied over a filler and sufficient adhesion does not occur.
PRECURE	Curing of a resin before pressing, it can also refer to incomplete sanding of a pressed board.

PREFINISHED PANEL	Panels having factory-applied decorative or protective coatings.
PRIMARY MARKS	Occasional deep scratches or marks that feel rough on finish sanded board, caused by the primary coarse grit sanding heads that are not totally removed by finish sanding heads.
PROFILE DENSITY	The variation of density of a panel from face to core.
PVC FILM	Film made of polyvinyl chloride used for decorative surfacing and may be either clear or solid colour. If it is clear, it is printed on the reverse side to protect the print. If it is a solid colour, the printing is on the top.
RECONSTITUTED WOOD	Wood, in forms ranging from log to coarse residue, is first reduced to small fragments and then put back together again by special manufacturing processes into panel products of relatively large sizes and various thicknesses such as particleboard, medium density fibreboard and hardboard.
RELATIVE HUMIDITY	Ratio of the amount of water vapour present in the air to that which the air would hold at saturation of the same temperature.
RESIN SPOTS	Hard pieces of dark or black foreign material in face layer that are composed of glue and wood dust.
ROUGH SAND	Area of a sanded panel that was not sanded with the finish sanding heads. The surface will appear and feel rough.
RPM (REVOLUTION PER MINUTE)	The turning speed of a motor or cutting tool.
RUN OFF SANDER BELT	A corner or edge of a panel that did not get sanded. This area is thicker than the rest of the panel and sometimes has a black marking on the unsanded area.
SANDER HESITATION	Sander head marks that appear across the panel width, the marks are low concave indentations with radius of the sander head caused when the panel stopped under a sander head. At times, there will be primary sanding marks on the other side.
SANDER SKIP	Area of a sanded panel that was not sanded and surrounding areas were. These areas are usually low indentations in the panel.
SAND THROUGH	A condition where the face layer has been sanded off exposing the core. These areas will appear to be darker and larger particles will be exposed.
SATURATED PAPERS	Decorative surface papers generally weighing between 60 & 130 grams per square metre. These papers are saturated with melamine or polyester resins and partially cured at the point of manufacture. Final curing is done at the time of hot press lamination.

SCREWHOLDING	A measure of the force required to withdraw a screw directly from the face or edge of a board stated in Newtons (N).
SPRINGBACK	Tendency of a pressed particleboard panel to return to its original uncompressed state.
SQUARENESS	Right angles of the corners or equal diagonals from corner to corner.
STARVED GLUELINES	A condition caused by an insufficient adhesive spread to adhere two materials together as in a laminated panel construction.
SUBSTRATE	A material that provides the surface on which an adhesive is spread for any purpose such as laminating or coating.
SWELL	Thickness increase in a panel which can occur from excessive moisture pick up or wetting.
TENSILE STRENGTH (INTERNAL BOND STRENGTH)	The greatest longitudinal stress a material can resist without tearing apart. Value stated in Megapascals (Mpa).
THERMOPLASTIC	Resins or adhesives that harden at room temperature and re-soften upon exposure to heat.
THERMOSETTING	Resins or adhesives that cure at room temperature or in the hot press by chemical reaction to form rigid bands that are not re-softened by exposure to heat.
UREA FORMALDEHYDE (UF)	Interior grade thermosetting resin system, commonly used in the manufacture of particleboard (ANSI A208.1 Type 1).
UNBALANCED CONSTRUCTION	When individual components or layers of a laminate do not respond equally to changes in moisture thus causing warp.
UNIFORM LOAD	A load distributed evenly across a shelf or panel.
WARP	When a board bends, twists or turns from a straight line due to unbalanced construction, excessive moisture pick-up, wetting or other unfavourable exposures.
WET BULB TEMPERATURE	Temperature of the wet bulb thermometer in a relative humidity measurement. Compared with the dry bulb temperature to determine RH.

Particleboard Questions

1. What can be done to make it waterproof?

Particleboard can never be made waterproof. Proper use of sealants will yield a component with a high resistance to moisture.

2. What type of paint must be used to get a smooth finish?

Particleboard must first be sanded to 150 grit and then receive a good compatible primer. For a smooth finish, gloss or satin type paint must be used. The final finish is dependant on the surface quality of the board combined with workmanship.

3. What edging must be used?

The edging must be compatible with the surfacing material used i.e. type, colour & finish. Application requirements must also be taken into account e.g. for high impact areas use Formica, Rigid P.V.C or solid timber edging material. P.V.C and Foil edging may be used in light to medium traffic areas.

4. Is it durable?

Particleboard is extremely durable if used under recommended conditions.

5. How easy is it to cut?

Particleboard is easy to cut and machine, and all machines and cutting tools used in the woodworking industry are suitable.

6. What type of saw blade must I cut with?

T.C.T (Tungsten Carbide Tipped) saw blades. Saw blades to suit power output of machine, refer to recommendations.

7. Can it be cut with a portable electric saw?

Yes – a Tungsten tipped saw blade with either a combination tooth or triple cut configuration will provide the best results.

8. Can edges be routed?

Yes – Use T.C.T router bits.

9. Which adhesive must I use to join the different PG Bison products?

Any adhesive (glue) used for wood can be used for PG Bison products, depending on application requirements and fabrication procedures.

10. How strong is it? Is it as strong as blockboard or plywood?

Bisonbord has a lower bending strength (M.O.R.) than plywood but is stronger than blockboard. When veneered, Bisonbord compares well with plywood.

11. Is there a fire rating on board and if so what is it?

Yes – Class 5, which is the lowest rating for combustible materials. Building Regulations should be consulted when specifying Particleboard for building construction applications (e.g. partitioning).

12. How does the Scoring saw prevent chipping?

The Scoring saw cuts a groove 2-3mm into the opposite side just before the main saw blade cuts through the material, thus preventing chipping.

13. How heavy is particleboard?

If the density is 680kg/m^3 and the thickness is 16mm. Then 1m^2 weighs $680 \times 0.016 = 10.9\text{kg/m}^2$.

14. Will the product bow or warp?

The product will only bow or warp if:

1. It is unbalanced (sanding or forming defects),
2. It is unbalanced (laminating one side only),
3. It is wetter or drier one side.

15. Which is stronger, Particleboard or Supawood?

Although Supawood has a higher bending strength, it cannot be used unveneered or unlaminated for high load shelving due to its mono construction. Supawood has a low resistance to creep.

16. Is Particleboard waterproof?

No – no wood or wood product is waterproof. It can be rendered water resistant only. Recommended surfacing and sealing instructions should be used to prevent water damage.

17. What is the mass of a board?

At 680kg/m^3 and 16mm thick, a 1m^2 board weighs 10.9kg.
Thus a $3.66 \times 1.83 = 3.66 \times 1.83 \times 10.9 = 73\text{kg}$.

18. Can you nail Particleboard?

Hand nailing is not recommended. Machine nailing is possible with resin coated nails with a maximum thickness of 1.8mm.

19. What size or gauge of Particleboard screw do I use?

2.0 – 7.0mm Twin-fast, double thread chipboard or metal screws. A pilot hole must always be drilled.

20. Can P.V.C edging be painted?

No, not with conventional paint systems.

21. Can MFB board be painted?

Yes - Plascon supplies a Melamine primer, which must be applied after a sanding and cleaning operation.

22. How can chipped edges of MFB be repaired?

Components may be trimmed smaller or chipped edges may be planed or sanded. The corner arris may be highlighted by a light sanding operation to remove objectionable chipping.

23. Why can't I use MFB for worktops?

MFB has a very thin Melamine formaldehyde impregnated decorative layer and will therefore have a low impact resistance. High pressure laminates on the other hand, provides the required mechanical, chemical and heat resistant properties for hard-wearing horizontal surface applications such as kitchen worktops.

24. What is Melamine?

Melamine is one of the chemicals used in the production of Melamine formaldehyde resins, which in turn is used to impregnate decorative papers for the manufacturing of Formica, Decon and Melawood.

25. What is the moisture content of Particleboard?

At 20 °C and 60% humidity for Particleboard made from Eucalyptus it would be $\pm 6\%$ - for Pine $\pm 8\%$.

26. Which is the best paint product to use to get a good finish?

Particleboard may be painted with any paints, however, the surface must be sanded to 150 grit, cleaned and then a compatible primer must be applied.

27. Why does a board split when screwed?

1. No pilot holes,
2. Screw too thick,
3. Using a hammer as a driver, or/and
4. Board IB too low.

28. What is 12' x 6' in metric?
What is 9' x 6' in metric?

12' x 6': 3.66m x 1.83m {
3660mm x 1830mm {Without oversize

9' x 6': 2.745m x 1.830m {
2745mm x 1830mm {Without oversize

29. Is particleboard treated for fungus and termites?

No – Not all grades – Only Bisondura is treated for this type of protection.

30. Why are so many kitchens in new complexes causing so many problems?

High moisture content within new buildings (units installed prematurely), damage by other trades and poor workmanship (insufficient sealing of worktops).

31. Will one sided finished materials give me problems? Even small components?

Yes – Any unbalanced construction will result in bowing when exposed to varying climatic conditions.

32. What is the best way to seal worktops? Especially around the sink?

Sikaflex 1A, DAP Clear, Polyurethane Varnish, Bathroom Sealant, Enamel paint, Contact adhesive (2 coats) or any other product recommended by sealant manufacturers. All exposed edges, joints and cut-outs must be properly sealed. Fabricators and installers must apply products to manufacturers instructions and test for fitness for use.

33. Can Supawood be used outdoors?

Not recommended.

34. Can I make my front door out of Supawood? Even if it is under a small roof?

Only if it is under a small roof and not directly exposed to harsh environmental conditions (sun, rain etc.).

35. What product can I make my dinghy/raft out of?

Marineply only

36. What effects does the density have on the board?

Density has an effect on the weight of a board – high density will result in a heavy board, while low density will result in a lighter board.
PG Bison produces Particleboard with densities designed to provide a balance between cost and physical property performance requirements.

37. What causes telegraphing/particle swell?

Large particles on the surface of boards will swell when water is absorbed. Through the use of a water-borne adhesive such as PVAc, these raised particles will then telegraph through thin surfacing materials, especially foils and P.V.C.

38. Why is such a fine surface finish on Particleboard necessary?

1. To prevent telegraphing when laminating.
2. To ensure quality surface finishes (e.g. painting, printing, etc.).

39. Why is 12mm board not that much cheaper than 16mm?

The loss in production of both time and volume on a 12mm board is higher in % and the volume of material used not that much less.

Supawood Questions

1. What type of timber is used to manufacture Supawood?

All timber species are suitable for manufacturing of MDF. Supawood is the brand name used by PG Bison for MDF. Supawood is produced from various types of Eucalyptus species, mainly Grandis.

2. Why is imported MDF smoother than Supawood?

The surface can only be smoother if it has been sanded with a finer grit sandpaper. Supawood is sanded to 100 grit. Supawood has a tighter and harder surface than most other MDF products produced worldwide. The international requirement for Surface Absorption (Run Test) of MDF is 150mm (minimum) and Supawood normally exceeds 300mm.

3. Why is Supawood more expensive than Particleboard (chipboard)?

MDF is more expensive to produce than particleboard due to various factors such as higher energy consumption and higher density. The higher density results in a higher timber and resin usage.

4. Is Supawood waterproof?

No board product is waterproof – there are only degrees of water resistance. Standard grade MDF (general purpose board) has a higher water resistance than standard grade particleboard (furniture board), but is not suitable for exterior applications. Exterior grade boards are produced using different binders e.g. Melamine, Phenolic, Isocyanate, urethane, Wattle extract, etc.

5. What causes the board to blow?

In the manufacturing process of MDF and Particleboard, water is used as a medium to transfer the heat required to cure the resin into the centre of the board. Thus, if too much water is used, or if the cycle time is incorrect, the water vapour pressure inside the board could be higher than the internal bond strength thus tearing (blowing) the board apart (delamination).

6. What can be done to make boards waterproof?

Supawood can be made more water resistant by sealing all surfaces, edges, joints and cut-outs. Boards may be surfaced with Formica and expose edges, joints and cut-outs may be sealed with a polyurethane or polysulphide.

7. Can Supawood be used for front doors?

Yes. The door must, however, be protected from direct rain and sunlight by a porch or other means, and a proper sealing system must be used to prevent moisture penetration. Damage during use must immediately be repaired and the door must be properly maintained.

8. What causes Supawood to peel off in layers?

The boards are formed in layers with the fibres lying mostly in the plane of the board and is similar to paper or hardboard. When sellotape is stuck to paper and peeled, a layer of fibre will remain on the back of the tape.

9. How do you get a smooth paint finish on Supawood?

The final paint finish is very dependant on the preparation before painting. The finer the sanding finish before and after sealing of the board, the better the final finish.

10. What causes “pinholes” in the paint finish?

Pinholes may be caused by:

- Inadequate or defective primer,
- Poor primer application,
- Impurities or contamination in the paint,
- Water in the paint,
- Incompatibility of solvents used in the paints, or/and
- Contamination in environment.

11. How do I get a smooth finish on the profiled edges?

The edges must be well prepared with any machining or burn marks removed and finely sanded before and after scalding. A sealant must be applied prior to painting.

12. Why is the surface furry?

The surface of Supawood is normally not furry. The degree of furriness of the surface or edge depends on:

- Surface quality,
- Sanding finish.

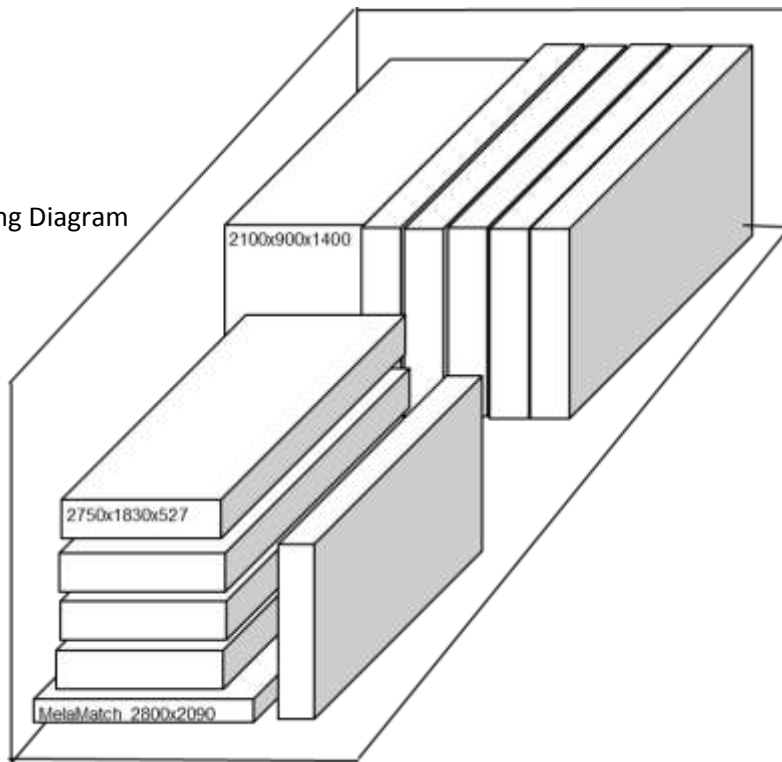
The fibre tips are lifted in one direction during the sanding operation. This may be corrected by using a finer sandpaper during the preparation for painting process.

13. What is creep resistance?

Creep may be described as the slow sagging motion of a board (e.g. shelf) under constant load for an extended period of time.

Export Packing

Mixed Container Packing Diagram



Container Dimensions	Door	2342mm Width x 2280mm Height
	Internal	2350mm Width x 2393mm Height x 5900mm Length
	Weight	21,770 Kgs

BisonBord (Chipboard) 20' Container Packing Schedule

Size & Thickness		Qty Boards Pallet Type 1	Qty Boards Pallet Type 2	Cover Board Top + Bottom	Pallet Height Type 1	Pallet Height Type 2	Qty of Pallet 1	Qty of Pallet 2	Total Boards Pallet 1	Total Boards Pallet 2	Total Boards per Contr	Total m2 in Contr	Wgt of Pallet 1 Big	Wgt of Pallet 2 Small	Wgt of Contr
9x6 (2750 x 1830mm)	6 mm	81	66	32	518	428	8	2	648	132	780	3 925.35	1 914.72	1 560.14	18 438.00
	9 mm	54	44	32	518	428	8	2	432	88	520	2 616.90	1 819.14	1 482.26	17 517.60
	12 mm	40	34	32	512	440	8	2	320	68	388	1 952.61	1 799.31	1 529.41	17 453.32
	16 mm	30	24	32	512	416	8	2	240	48	288	1 449.36	1 698.80	1 359.04	16 308.48
	18 mm	27	22	32	518	428	8	2	216	44	260	1 308.45	1 720.86	1 402.18	16 571.20
	22 mm	22	18	32	516	428	8	2	176	36	212	1 066.89	1 700.39	1 391.23	16 385.56
	25 mm	19	16	32	507	432	8	2	152	32	184	925.98	1 678.68	1 413.63	16 256.72
	28 mm	17	14	32	508	424	8	2	136	28	164	825.33	1 662.89	1 369.44	16 042.00
32 mm	15	12	32	512	416	8	2	120	24	144	724.68	1 664.00	1 331.20	15 974.40	

MelaWood (MFB) 20' Container Packing Schedule

Size & Thickness		Qty Boards Pallet Type 1	Qty Boards Pallet Type 2	Cover Board Top + Bottom	Pallet Height Type 1	Pallet Height Type 2	Qty of Pallet 1	Qty of Pallet 2	Total Boards Pallet 1	Total Boards Pallet 2	Total Boards per Contr	Total m2 in Contr	Wgt of Pallet 1 Big	Wgt of Pallet 2 Small	Wgt of Contr
9x6 (2750 x 1830mm)	6 mm	81	66	32	518	428	8	2	648	132	780	3 925.35	2 143.14	1 746.26	20 637.60
	9 mm	54	44	32	518	428	8	2	432	88	520	2 616.90	1 971.42	1 606.34	18 984.00
	12 mm	40	34	32	512	440	8	2	320	68	388	1 952.61	1 912.11	1 625.29	18 547.48
	16 mm	30	24	32	512	416	8	2	240	48	288	1 449.36	1 783.40	1 426.72	17 120.64
	18 mm	27	22	32	518	428	8	2	216	44	260	1 308.45	1 797.00	1 464.22	17 304.40
	22 mm	22	18	32	516	428	8	2	176	36	212	1 066.89	1 762.43	1 441.99	16 983.40
	25 mm	19	16	32	507	432	8	2	152	32	184	925.98	1 723.71	1 451.55	16 692.80
	28 mm	17	14	32	508	424	8	2	136	28	164	825.33	1 710.83	1 408.92	16 504.48
32 mm	15	12	32	512	416	8	2	120	24	144	724.68	1 706.30	1 365.04	16 380.48	

SupaWood (MDF) 20' Container Packing Schedule

Size & Thickness			Qty Boards Pallet Type 1	Qty Boards Pallet Type 2	Cover Board Top + Bottom	Pallet Height Type 1	Pallet Height Type 2	Qty of Pallet 1	Qty of Pallet 2	Total Boards Pallet 1	Total Boards Pallet 2	Total Boards per Contr	Total m2 in Contr	Wgt of Pallet 1 Big	Wgt of Pallet 2 Small	Wgt of Contr
9x6 (2750 x 1830mm)	12	mm	40	34	32	512	440	8	2	320	68	388	1952.61	2104.91	1789.17	20417.64
	16	mm	30	24	32	512	416	8	2	240	48	288	1449.36	2029.40	1623.52	19482.24
	18	mm	27	22	32	518	428	8	2	216	44	260	1308.45	2028.12	1652.54	19530.00
	22	mm	22	18	32	516	428	8	2	176	36	212	1066.89	2020.71	1653.31	19472.28
	32	mm	15	12	32	512	416	8	2	120	24	144	724.68	2004.80	1603.84	19246.08

SupaLam 20' Container Packing Schedule

Size & Thickness			Qty Boards Pallet Type 1	Qty Boards Pallet Type 2	Cover Board Top + Bottom	Pallet Height Type 1	Pallet Height Type 2	Qty of Pallet 1	Qty of Pallet 2	Total Boards Pallet 1	Total Boards Pallet 2	Total Boards per Contr	Total m2 in Contr	Wgt of Pallet 1 Big	Wgt of Pallet 2 Small	Wgt of Contr
9x6 (2750 x 1830mm)	12	mm	40	34	32	512	440	8	2	320	68	388	1952.61	2146.11	1824.19	20817.28
	16	mm	30	24	32	512	416	8	2	240	48	288	1449.36	2060.30	1648.24	19778.88
	18	mm	27	22	32	518	428	8	2	216	44	260	1308.45	2050.26	1670.58	19743.20
	22	mm	22	18	32	516	428	8	2	176	36	212	1066.89	2043.37	1671.85	19690.64
	32	mm	15	12	32	512	416	8	2	120	24	144	724.68	2020.10	1616.08	19392.96

Work Tops 20' Container Packing Schedule

Size & Thickness			Qty Boards Pallet Type 1	Qty Boards Pallet Type 2	Cover Board Top + Bottom	Pallet Height Type 1	Pallet Height Type 2	Qty of Pallet 1	Qty of Pallet 2	Total Boards Pallet 1	Total Boards Pallet 2	Total Boards per Contr	Total m2 in Contr	Wgt of Pallet 1 Big	Wgt of Pallet 2 Small	Wgt of Contr
3530 x 600	32	mm	20	10	0	640	320	9	3	180	30	210	444.78	1052.89	526.44	11055.30
3530 x 640	32	mm	20	5	0	640	160	9	2	180	10	190	429.21	1099.12	274.78	10441.60
3530 x 900	32	mm	20	10	0	640	320	6	2	120	20	140	444.78	1171.43	585.71	8200.00
3660 x 600	32	mm	20	10	0	640	320	9	3	180	30	210	461.16	1150.89	575.44	12084.30
3660 x 640	32	mm	20	5	0	640	160	9	2	180	10	190	445.06	1526.12	381.53	14498.10
3660 x 900	32	mm	20	10	0	640	320	6	2	120	20	140	461.16	1622.83	811.41	11359.80

Container Dimensions	Door	2340mm Width x 2280mm Height
	Internal	2350mm Width x 2392mm Height x 12036mm Length
	Weight	26,780 Kgs

BisonBord (Chipboard) 40' Container Packing Schedule

Size & Thickness		Qty Boards Pallet Type 1	Cover Board Top + Bottom	Pallet Height Type 1	Qty of Pallet 1	Total Boards Pallet 1	Total Boards per Contr	Total m2 in Contr	Wgt of Pallet 1 Big	Wgt of Contr
9x6 (2750 x 1830mm)	6 mm	63	32	410	16	1008	1008	5 072.76	1 467.30	23 476.80
	9 mm	45	32	437	16	720	720	3 623.40	1 487.10	23 793.60
	12 mm	35	32	452	16	560	560	2 818.20	1 541.15	24 658.40
	16 mm	28	32	480	16	448	448	2 254.56	1 543.88	24 702.08
	18 mm	25	32	482	16	400	400	2 013.00	1 553.00	24 848.00
	22 mm	21	32	494	16	336	336	1 690.92	1 579.23	25 267.68
	25 mm	18	32	482	16	288	288	1 449.36	1 547.94	24 767.04
	28 mm	16	32	480	16	256	256	1 288.32	1 523.00	24 368.00
32 mm	14	32	480	16	224	224	1 127.28	1 511.40	24 182.40	

MelaWood (MFB) 40' Container Packing Schedule

Size & Thickness		Qty Boards Pallet Type 1	Cover Board Top + Bottom	Pallet Height Type 1	Qty of Pallet 1	Total Boards Pallet 1	Total Boards per Contr	Total m2 in Contr	Wgt of Pallet 1 Big	Wgt of Contr
9x6 (2750 x 1830mm)	6 mm	63	32	410	16	1008	1008	5 072.76	1 644.96	26 319.36
	9 mm	45	32	437	16	720	720	3 623.40	1 614.00	25 824.00
	12 mm	35	32	452	16	560	560	2 818.20	1 639.85	26 237.60
	16 mm	28	32	480	16	448	448	2 254.56	1 622.84	25 965.44
	18 mm	25	32	482	16	400	400	2 013.00	1 623.50	25 976.00
	22 mm	21	32	494	16	336	336	1 690.92	1 638.45	26 215.20
	25 mm	18	32	482	16	288	288	1 449.36	1 590.60	25 449.60
	28 mm	16	32	480	16	256	256	1 288.32	1 568.12	25 089.92
32 mm	14	32	480	16	224	224	1 127.28	1 550.88	24 814.08	

SupaWood (MDF) 40' Container Packing Schedule

Size & Thickness			Qty Boards Pallet Type 1	Cover Board Top + Bottom	Pallet Height Type 1	Qty of Pallet 1	Total Boards Pallet 1	Total Boards per Contr	Total m2 in Contr	Wgt of Pallet 1 Big	Wgt of Contr
9x6 (2750 x 1830mm)	12	mm	31	32	404	16	496	496	2 496.12	1 610.43	25 766.88
	16	mm	24	32	416	16	384	384	1 932.48	1 598.52	25 576.32
	18	mm	22	32	428	16	352	352	1 771.44	1 626.00	26 016.00
	22	mm	18	32	428	16	288	288	1 449.36	1 626.42	26 022.72
	32	mm	12	32	416	16	192	192	966.24	1 578.84	25 261.44

SupaLam 40' Container Packing Schedule

Size & Thickness			Qty Boards Pallet Type 1	Cover Board Top + Bottom	Pallet Height Type 1	Qty of Pallet 1	Total Boards Pallet 1	Total Boards per Contr	Total m2 in Contr	Wgt of Pallet 1 Big	Wgt of Contr
9x6 (2750 x 1830mm)	12	mm	31	32	404	16	496	496	2 496.12	1 642.36	26 277.76
	16	mm	24	32	416	16	384	384	1 932.48	1 623.24	25 971.84
	18	mm	22	32	428	16	352	352	1 771.44	1 644.04	26 304.64
	22	mm	18	32	428	16	288	288	1 449.36	1 644.96	26 319.36
	32	mm	12	32	416	16	192	192	966.24	1 591.08	25 457.28

Work Tops 40' Container Packing Schedule

Size & Thickness			Qty Boards Pallet Type 1	Qty Boards Pallet Type 2	Cover Board Top + Bottom	Pallet Height Type 1	Pallet Height Type 2	Qty of Pallet 1	Qty of Pallet 2	Total Boards Pallet 1	Total Boards Pallet 2	Total Boards per Contr	Total m2 in Contr	Wgt of Pallet 1 Big	Wgt of Pallet 2 Small	Wgt of Contr
3530 x 600	32	mm	20	10	0	640	320	18	6	360	60	420	889.56	995.74	497.87	20 910.60
3530 x 640	32	mm	20	0	0	640	0	18	4	360	0	360	813.24	1 039.47	0.00	18 710.40
3530 x 900	32	mm	20	10	0	640	320	12	4	240	40	280	889.56	1 085.71	542.86	15 200.00
3660 x 600	32	mm	20	10	0	640	320	18	6	360	60	420	922.32	1 093.74	546.87	22 968.60
3660 x 640	32	mm	20	0	0	640	0	18	4	360	0	360	843.26	1 466.47	0.00	26 396.40
3660 x 900	32	mm	20	10	0	640	320	12	4	240	40	280	922.32	1 537.11	768.56	21 519.60