TECHNICAL DATA
Pinnacle Decorative Laminates

1. **Product Description**
   Pinnacle laminates consist of melamine-impregnated decorative surface papers compressed over phenolic-impregnated kraft paper in press machinery with high pressure and high heat. The finished sheet backs are sanded to maintain thickness uniformity and sheet edges are trimmed to the standard finished sizes.

2. **Recommended Use**
   Pinnacle decorative laminates are suitable for use on interior residential and commercial furniture, fixtures and casework, and for architectural application on columns, wainscoting, valances cornices, interior doors and divider systems.

   General Purpose is most frequently used for work surfaces on counters, islands, vanities, desks and tables. Typical vertical uses include surfacing for wall panels, teller cages and the front panels of workstations, such as those in hospitals, airports and restaurants. Pinnacle laminates are for both horizontal and vertical interior applications where the surface must be functional, durable and decorative.

Standard Sheet Widths

48″
1,219mm

Standard Sheet Lengths

96″	
2,438mm	

Thickness and Weight

Thickness	0.9mm
Weight per ft²	0.22 lbs

3. **Basic Limitations**
   Pinnacle laminates are for interior use only. The following substrates are not recommended for direct application: drywall (gypsum board), concrete or plaster. Pinnacle laminates should not be used in areas of extreme temperatures exceeding 275°F (135°C) or extreme humidity areas.

4. **Storing**
   Pinnacle laminates should be stored horizontally with a protective sheet or board on top to protect from damage. Ideal storage conditions are approximately 75°F (24°C) at 45% to 55% relative humidity. Laminates should be protected from moisture and never stored in contact with the floor or outside wall.

5. **Preconditioning**
   Ensure the face laminate, backing laminate and the substrate are allowed an appropriate acclimation in the same ambient conditions for a minimum of 48 hours prior to fabrication. Ideal conditions are about 75°F (24°C) at 45% to 55% relative humidity.

6. **Substrates**
   Pinnacle laminates must be bonded to a suitable substrate, such as particleboard, medium density fiberboard or A-faced plywood. Do not bond directly to high-pressure laminate, drywall (gypsum board), concrete or plaster. Substrates should be sanded smooth, uniform thickness and clean of dust, oil or grease.

7. **Adhesives**
   Permanent adhesives, such as rigid (urea), semi-rigid (polyvinyl acetate [PVA]), and contact types are recommended. Follow the instructions recommended by the adhesive manufacturer.

8. **Assembly Recommendations**
   Fabrication should follow the Pinnacle recommended procedures, conditions and practices as specified by ANSI A-161.2-1998 (revised), NEMA LD3-2005 and "Architectural Woodwork Quality Standards, Guide Specifications and Quality Certification Program" guidelines of the Architectural Woodwork Institute where applicable.

   To avoid stress cracking, do not use square-cut inside corners. Inside corners must be radiused 1/8" (3.18mm) minimum. All edges and corners should be routed, sanded or filed smooth.

   Screw or bolt holes should be drilled oversized. It's recommended screws or bolts be countersunk into the face side of a laminate-clad substrate.

   Pinnacle laminates (Class 20) should be cut, drilled, routed and fabricated using carbide-tipped tools. A high tool speed, low feed speed and use of a hold-down to prevent vibration are strongly encouraged.

9. **Manufacturer**
   Pinnacle Decorative Laminates brand laminate sheets are manufactured by Crown Decor Pvt. Ltd.

10. Technical Data

Performance Compliance

NEMA LD3-2005 Test	Results
Surface Finish: 60 degree gloss measurement (machine direction/cross machine direction)	11.2 / 11.0
Boiling Water Resistance [2] :	No effect
High Temperature Resistance (oil) [2] :	No effect
Light Resistance [2] : Test conditions - black panel temp 70C wet bulb depression 11C conditioning water 20C calibration at 420nm irradiance rate 1.09 W/m2 (1.10 +/- 0.03) **total irradiance 285.1 kJ/m2**	No effect
Linear Glass Scratch Resistance [4] : *Scratches at 20, 50, 100, 200g loading*	<50g
Diamond Scratch Resistance [5] : *Scratches at 1N, 2N, 4N, 6N loading* *"contrast media" rubbed into scratches & wiped off*	Rating 4
Blister Resistance: *Average time in seconds to failure of 3 test runs*	-
Dart Impact Resistance: Test conditions - 25g dart - 5mm diameter spherical tip *Report drop height with no surface fracture prior to a series of 3 consecutive fractures*	575mm
Radiant Heat Resistance (coil method): *Average time in seconds to failure of 3 test runs*	171.6
Radiant Heat Resistance (strip method): *Average time in seconds to failure of 3 test runs*	203
Dimensional Change Test conditions - conditioned at 50% RH 70F dry = convection oven at 70C for 24 hrs wet = 93% RH 40C for 7 days (machine direction/cross machine direction)	0.55% / 0.72%

NEMA LD3-2005 Test *cont'd.*	Results
Cleanability/Stain Resistance [3] : *Reagent # - Stain Reagent*	15 / 11 Moderate Effect
1 - Distilled water	0 / N
2 - 50:50 SD-3A ethyl alcohol:water	0 / N
3 - Acetone	0 / N
4 - Household ammonia (non-sudsing)	0 / N
5 - 10% citric acid solution	0 / N
6 - Vegetable cooking oil	0 / N
7 - Freshly prepared coffee	0 / N
8 - Freshly prepared tea	0 / N
9 - Tomato catsup	0 / N
10 - Plain prepared yellow mustard	0 / N
11 - Povidone iodine (10%)	5 / M
12 - Permanent Marker Pen	3 / N
13 - #2 pencil	2 / N
14 - Wax crayon	2 / N
15 - Shoe polish (black paste)	3 / N
Ball Impact Resistance: Test conditions - 224g steel ball - 38.1mm diameter *Report drop height with no surface fracture in 3 replicate drops*	900mm
Room Temperature Dimensional Stability: Test conditions - conditioned at 50% RH 70F wet = 98% RH 70F for 4 days dry = 10% RH 70F for 4 days (machine direction/cross machine direction)	0.23% / 0.61%
Surface Wear Resistance: Test conditions - abrasive strip correction factor = 0.934 *Wear resistance is the average of initial and final points for 3 samples, adjusted by the abrasive strip correction factor, and rounded to the nearest 50 cycles*	650
Formability: *Pass or fail for the minimum required forming radius on 3 samples (breaking, cracking, crazing, discoloration)* (machine direction/cross machine direction)	- / -

2 - No Effect = no visible color or gloss change under the specified viewing conditions
Slight Effect = difficult to perceive change in color or gloss visible only at certain viewing angles or directions
Moderate Effect = difficult to perceive change in color or gloss visible at all viewing angles or directions
Severe Effect = easily perceived change in color or gloss, or permanent change/damage to the decorative surface

3 - Cleaning steps:
1. tap water -- removed = (0)
2. BCS + sponge w/1 kg weight -- 25 cycles -- rinse w/ tap water -- removed = (1)
3. BCS + baking soda + brush -- 25 cycles -- rinse w/ tap water -- removed = (2)
4. Cotton ball + nail polish remover -- rub ≤ 2 minutes -- rinse w/ tap water -- removed = (3)
5. Cotton ball w/ bleach -- 2 minutes -- rinse w/ tap water -- removed = (4)
6. If reagent remains visible = (5)

Cleanability = sum of reagent cleaning scores
Stain Resistance = No effect / Moderate Effect / Severe Effect -- (reagents with cleaning score=5)
No Effect = no visible color or surface change under the specified viewing conditions
Moderate Effect = difficult to perceive stain visible at all viewing angles or directions
Severe Effect = easily perceived stain, or permanent change/damage to the decorative surface

4 - "<20g" = 20g, 50g, 100g & 200g scratches visible under specified viewing conditions
"<50g" = 50g, 100g & 200g scratches visible under specified viewing conditions
"<100g" = 100g & 200g scratches visible under specified viewing conditions
"<200g" = 200g scratches visible under specified viewing conditions
">200g" = no scratches visible under specified viewing conditions

5 - Rating 1 = Scratches at 1N, 2N, 4N & 6N visible under specified viewing conditions
Rating 2 = Scratches at 2N, 4N & 6N visible under specified viewing conditions
Rating 3 = Scratches at 4N & 6N visible under specified viewing conditions
Rating 4 = Scratches at 6N visible under specified viewing conditions
Rating 5 = No scratches visible under specified viewing conditions

11. Certifications

Pinnacle decorative laminates are certified for GREENGUARD, FSC and NEMA LD3-2005.

GREENGUARD Indoor Air Quality Certified

FSC

NEMA LD3-2005