

Second GRADE TRUPAN

ADMISSIBLE DEFECTS IN SURFACE & EDGES BY GRADE

Second grade TRUPAN products comply with the specifications for physical-mechanical properties of TRUPAN, but are not acceptable as regular products because they present superficial defects described in this document. These defects do not alter the panel's physical-mechanical properties. Second grade products are sold according to stock availability.

TRUPAN COMPARATIVE TABLE - PANEL SURFACE DEFECTS		
Attribute	TRUPAN First grade	TRUPAN Second grade
1. Roughness	Not permitted, surface must be smooth (<3 Ra)	Permitted (between 3 and 7 Ra)
2. Shives	Not permitted if noticeable	Permitted
3. Oversized	1 is accepted per linear meter, smooth, with a maximum of 1 cm ²	Permitted, no restrictions, not raised
4. Aureoles	Not permitted	Permitted, no restrictions
5. Oli stains	Not permitted	5 stains permitted, per face, 3 cm ² each
6. Water stains	5 stains permitted, maximum 1 cm ² (IC)	Permitted, no restrictions
7. Dead fiber	Not permitted	Permitted, no restrictions
8. Orange peel	Not permitted	Permitted, no restrictions
9. Chatter (Calamine)	Not permitted	Permitted, no restrictions
10. Sanding grit marks	Permitted if not visible at first glance	Permitted even if noticeable
11. Tone differences	Permitted according to pattern	Permitted even if noticeable
12. Shine	Permitted if mild	Permitted, no restrictions
13. Chain marks	Permitted if faint (according to pattern)	Permitted, no restrictions
14. Fiber granulometry	Thick, 2% to 3%; Thin, 87% to 88%	Thick, >3%

TRUPAN COMPARATIVE TABLE - PANEL EDGE DEFECTS		
Attribute	TRUPAN First grade	TRUPAN Second grade
1. Delamination	Not permitted	Not permitted
2. Blow	Not permitted	Not permitted
3. Saw marks	Permitted if mild, and if the surface is not raised or dented	Permitted, no restrictions
4. Saw burns marks	Not permitted	Permitted, no restrictions
5. Chipping	Permitted, up to 3 mm deep	Permitted, up to 10 mm deep
6. Edge marks	Permitted, up to 2 mm deep	Permitted, up to 10 mm deep
7. Damaged edges	Not permitted	Permitted, up to 20 mm deep (2 faces), with a longitude of 20% of the length
8. Damaged corners	Not permitted	Permitted, up to 20 mm deep (2 faces)
9. Uneven square	2 mm length and width; 3 mm diagonal	5 mm length and width; 10 mm diagonal
10. Thickness	+/- 0.20 mm of nominal thickness	+/- 0.30 mm of nominal thickness

Panel SURFACE DEFECTS

1. Roughness

Raised fiber due to problems with the combination of sandpapers, their wear or sanding speed.



2. Shives

Large sized fiber on the panel's surface, mainly produced by problems with defibration, or disc malfunctions.



Panel SURFACE DEFECTS

3. Oversized

Thick fiber on the panel's surface due to defibration problems, disc malfunctions.



4. Aureoles

Round-shaped areas on a panel's surface that have a different color (often whitish) than the final product. Aureoles have a smooth surface and are produced by excess wait time on the unloader wheels.



5. Oil stains

Stains produced by oil leaks in the press and/or final line.



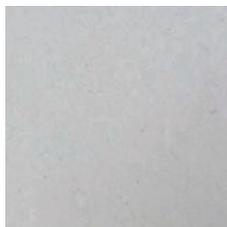
6. Water stains

Areas that present a different color compared to the panel's normal color.



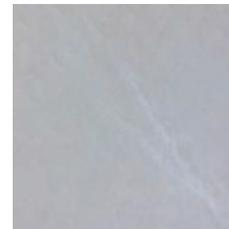
7. Dead fiber

Aged, dark colored fiber that can be found on the panel's surface. It is produced by aged fiber stuck to the silo and dryer ducts that detaches and contaminates the defibration process.



8. Orange peel

Long, light or dark colored marks that can be seen throughout the panel. They are produced by desynchronized transport speeds during the formation line.



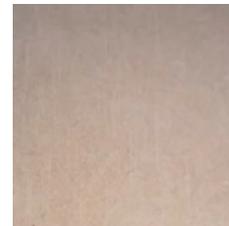
9. Chatter (Calamine)

Also termed calamine, these are lines that run across the direction in which the panel moves toward the sander machine. They have different color tones. On occasion, differences in texture can be found, produced by problems in the sanding modules, mainly because of the sander heads.



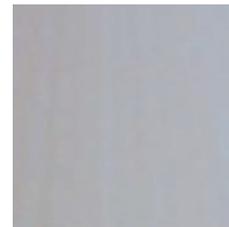
10. Sanding grit marks

Marks on panel surface produced by defective sanding, because of worn finishing sandpaper and/or a bad combination of sandpaper grit.



13. Chain marks

Light colored marks on the panel's back, with a well-defined pattern.

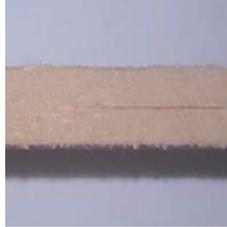


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Panel EDGE DEFECTS

1. Delamination

Opening along the panel's edge from differences in the bonding of fiber, produced by moisture or defective press cycles.



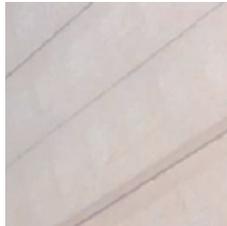
2. Blown

A localized delamination caused by steam pressure build-up during the hot pressing process. Blows may result from excessive moisture, excessive or poor resin distribution or high press temperatures.



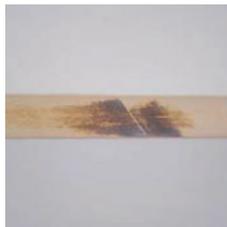
3. Saw marks

Marks generated by the cutter during the panel formatting stage. Some marks can present surface differences that can be felt when touched.



4. Saw burns marks

Brown colored marks on the panel's edge, after its formatted.



5. Chipping

Loss of material at panel edges, normally caused by the saw.



6. Edge marks

Marks on panel edges, produced by third parties, such as paint, stains and others.



7. Damaged edges

Physical damage to the panel's edges from blows, cracks, material shortage or others.



8. Damaged corners

Physical damage to the panel's corners from blows, cracks, material shortage or others.



Second grade TRUPAN boards, comply with the specifications for physical-mechanical properties of first grade TRUPAN.

