

## Panel grades

The pine plywood panels are graded based in their face and back face quality. The grading criteria take into consideration the type, quantity and dimensions of defects. Grading is held on a visual inspection.

The grades and requirements established by PNQM for pine plywood are presented in table 02. Figure 03 presents the pictures of the examples of pine veneers (plywood faces) from the different grades defined by PNQM.

Table 02 – Criteria for grading pine plywood.

TYPE OF DEFECT	FACE VENER GRADE				
	A	B	C+	C	D
SOUND KNOTS	Not accepted.	Less than 10 mm in diameter and maximum 10 units/face are allowed.		No limitation.	
OPEN KNOT/OPENINGS	Not accepted.	Open knots and openings caused by machinery instruments not bigger than 6 x 12,5 mm and repaired with filler.	No limits for open knots and holes caused by machinery instruments. However its size shall not exceed 65 mm in diameter with average under 50 mm and repaired with filler	No limitation.	
CORE GAP		Gaps under 20 mm are allowed	Gaps under 50 mm are allowed		No limitation.
OPEN JOINTS	Not accepted.		Open Joints not large than 2 mm in width and repaired with filler are allowed	Open Joints not large than 5 mm in width and repaired with filler are allowed	No limitation.
CRACKS	Not accepted.	Cracks less than 5 mm in width and 300 mm in length, and repaired with filler, are allowed.	Cracks less than 10 mm in width and 600 mm in length, and repaired with filler, are allowed.	Cracks less than 15 mm in width and 700 mm in length, and repaired with filler, are allowed.	No limitation.
NUMBER OF FACE JOINTS	None.	Only one	Maximum two	Maximum two	Maximum four
LAP	Not allowed	One per m <sup>2</sup> , not exceeding 100 mm in length	Maximum two per m <sup>2</sup> , not exceeding 400 mm in length	Maximum two per m <sup>2</sup> , not exceeding 600 mm in length	No limitation
BLUE STAIN	Not allowed.		Maximum 10% of faces area	Maximum 20% of faces area	No limitation.

Table 02 (cont.) – Criteria for grading pine plywood.

TYPE OF DEFECT	FACE VENNER GRADE				
	A	B	C+	C	D
WOOD REPAIR/PATCHING	Not exceeding 25 mm in width and 200 mm in length, combined in color and grain, glued with same resin of the panel production.	Not exceeding 100 mm in width and 600 mm in length, combined in color and grain, glued with same resin of the panel production.	Not exceeding 100 mm in width and 700 mm in length, combined in color and grain, glued with same resin of the panel production.	No limitation. However glued with de same resin of the panel production.	
SUM OF FACE DEFECTS (OPENED JOINTS + CRACKS + WOOD REPAIR / PATCHING + OPEN KNOT)	The number of repairs shall not exceed 6 of the total panel surface.	The number of repairs shall not exceed 8 of the total panel surface.	The number of repairs shall not exceed 30 of the total panel surface.	No limitations.	

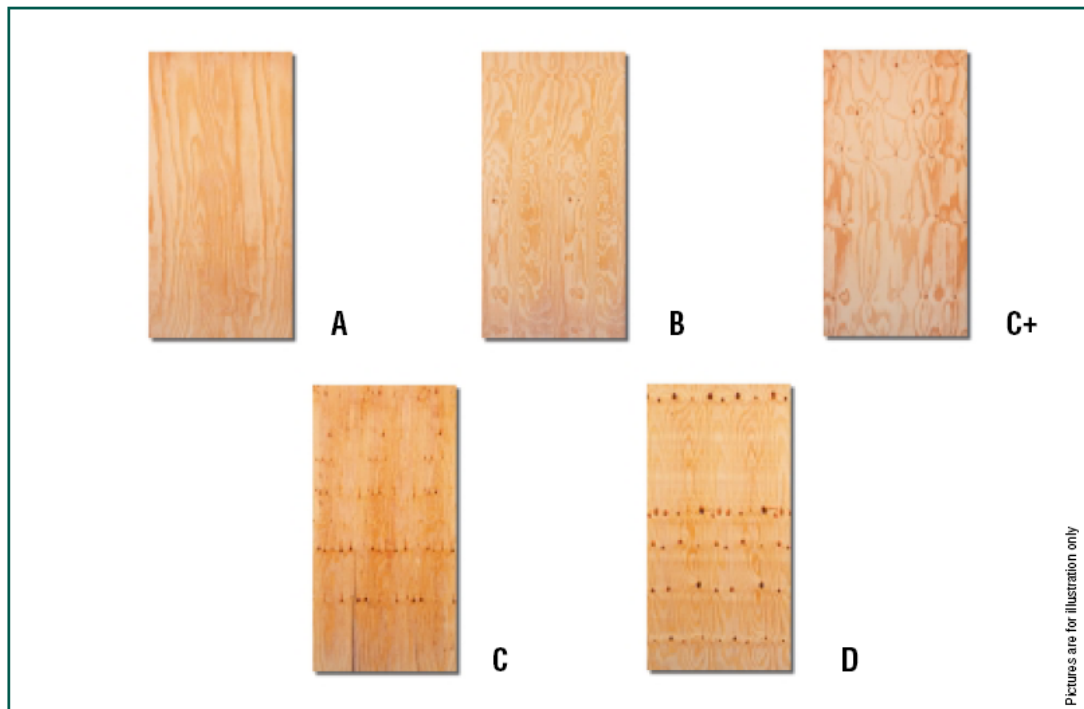


Figure 03 – Plywood grades.