



# Paged

Synergy of nature  
and technology

 [sklejkapaged.pl](https://sklejkapaged.pl)

 Softwood plywood surface  
classification

# Surface appearance classification of softwood plywood according to European norm PN-EN 635-3.



The standard gives general classification rules for the surface appearance of hardwood plywood according to both: defects inherent to wood characteristics and defects resulting from the manufacturing process. The standard covers hardwood plywood only. Plywood class is determined on the basis of the appearance of the surface. The plywood class description specifies the class of the right side first and then the class of the left side, e.g. Class II /III.

# Class I

Surface appearance classification determined by **wood characteristics**

## ALLOWED

- ✓ Pin knots  
Allowed: 3 pcs/m<sup>2</sup>
- ✓ Knots: sound, intergrown, light and dark  
Allowed up to 15 mm in diameter individually and 30 mm maximum when grouped; small shakes allowed.
- ✓ Black knots, intergrown knots, loose knots, knot holes  
Allowed up to 6mm in diameter when filled; 2pcs /m<sup>2</sup>
- ✓ Open shakes, open splits in spliced veneer  
Allowed up to 1/10 of the sheet's length and up to 3mm width, 3 pcs/m when filled
- ✓ Closed shakes

## NOT ALLOWED

- ✗ Inbark
- ✗ Resin blemishes

Surface appearance classification determined by **manufacturing process**

## ALLOWED

- ✓ Knotting and patching:
  - a) Wooden inserts
  - b) WedgesAllowed when filled and complete, 5 pcs/m<sup>2</sup>
- ✓ Edge defects caused by sanding, cutting (fringe), veneer shortage  
Allowed: up to 2 mm wide along the edge

## NOT ALLOWED

- ✗ Overlap ridges
- ✗ Air pockets
- ✗ Scratches, grooves, ridges
- ✗ Uneven sanding
- ✗ Face veneer oversanding
- ✗ Glue stains
- ✗ Metal inclusions



**Class I**





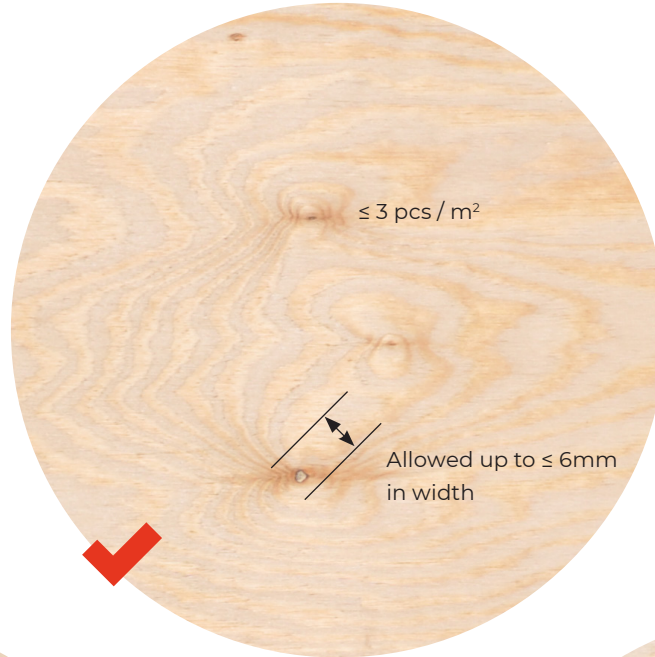
# Class I

Wooden inserts



$\leq 5 \text{ pcs} / \text{m}^2$

Pin knots and open shake



# Class II

Surface appearance classification determined by **wood characteristics**

## ALLOWED

- ✓ Pin knots
- ✓ Knots: sound, intergrown, light and dark  
Allowed up to 50 mm in diameter; small shakes allowed.
- ✓ Black knots, intergrown knots, loose knots, knot holes  
Allowed up to 25mm in diameter when filled; up to 5mm, when open; 6pcs/m<sup>2</sup>
- ✓ Open shakes, open splits in spliced veneer  
Allowed up to 1/3 of the sheet's length and up to 10mm width, 3 pcs/m. All shakes of 2 mm and more must be filled.
- ✓ Closed shakes
- ✓ Resin canals and pockets; inbark, light and dark  
Allowed up to 6 mm in width when filled
- ✓ Resin blemishes  
Allowed in moderation
- ✓ Timber structure flaws (diagonal grain, swirly grain, burls, bud traces)  
Allowed when moderate
- ✓ Sound discoloration  
Dopuszcza się nieznaczne różnicowanie naturalnej barwy drewna

## NOT ALLOWED

- ✗ Biological damage (wormholes, parasitic plants, microorganisms)  
No traces of parasitic plants allowed. Hollow corridors and wormholes are allowed of 3mm in diameter vertically to the sheet's surface, 10 pcs/m<sup>2</sup>

Surface appearance classification determined by **manufacturing process**

## ALLOWED

- ✓ Open shakes  
Allowed when filled with width of 1 mm and more – 1pc/m of the sheet's width
- ✓ Overlap ridges  
Allowed up to 100 mm length, 1 pc/m<sup>2</sup>
- ✓ Scratches, grooves, ridges  
Allowed when moderate
- ✓ Uneven sanding  
Allowed when moderate
- ✓ Glue stains  
Allowed when moderate
- ✓ Knotting and patching
  - a) Wooden inserts
  - b) Wedges  
Allowed when filled and complete
- ✓ Edge defects caused by sanding, cutting (fringe), veneer shortage  
Allowed: up to 5 mm wide along the edge

## NOT ALLOWED

- ✗ Face veneer oversanding
- ✗ Metal inclusions
- ✗ Air pockets



**Class II**



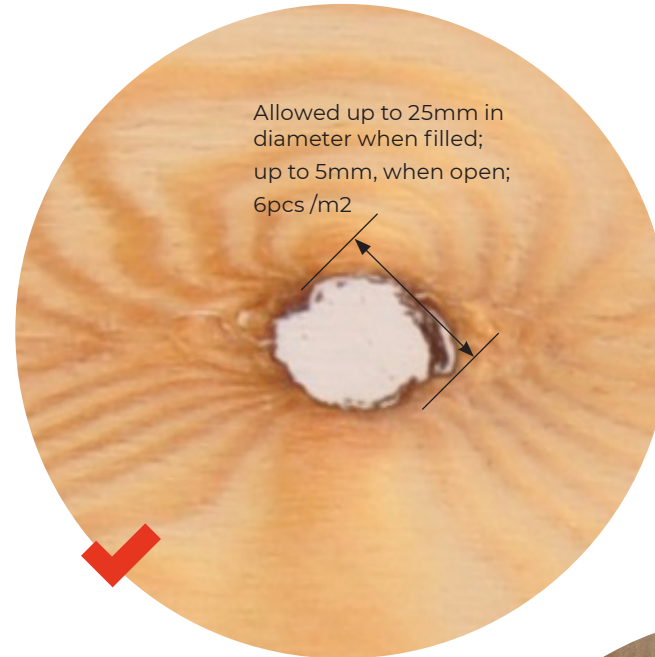


# Class II

Resin blemish



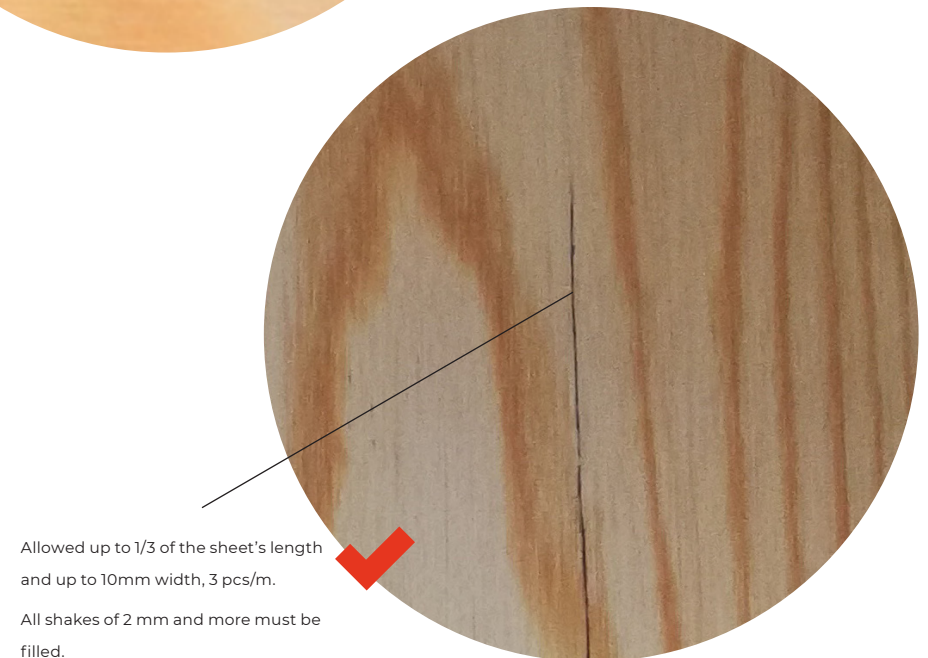
Filled knot



Sound knot



Open shake



# Class II



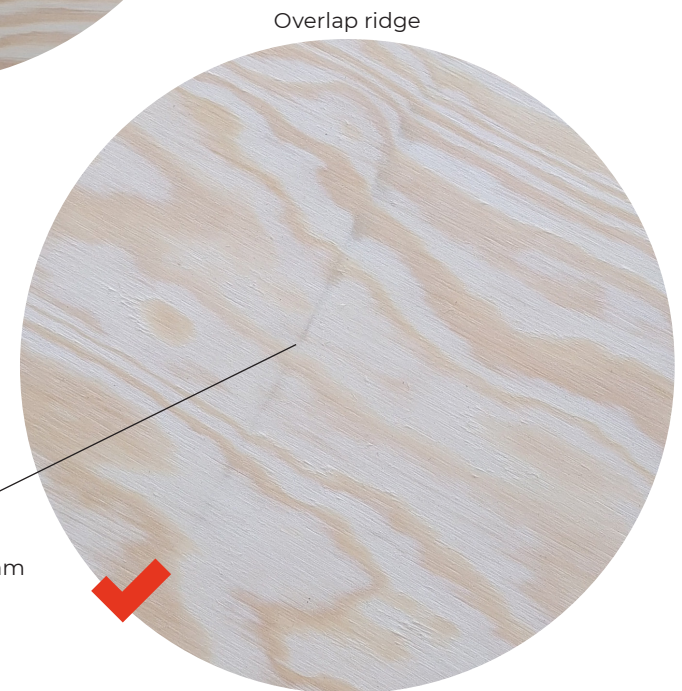
Sound discoloration



Wooden insert



Uneven sanding



Overlap ridge

Allowed up to 100 mm  
length, 1 pc/m<sup>2</sup>

# Class III

Surface appearance classification determined by **wood characteristics**

## ALLOWED

- ✓ Pin knots
- ✓ Knots: sound, intergrown, light and dark  
Allowed up to 50 mm in diameter.
- ✓ Black knots, intergrown knots, loose knots, knot holes  
Allowed up to 40mm in diameter
- ✓ Open shakes, open splits in spliced veneer  
Allowed up to ½ of the sheet's length and up to 15mm width, 3 pcs/m of the sheet's width.
- ✓ Closed shakes
- ✓ Resin canals and pockets; inbark, light and dark  
Allowed up to 40 mm in width
- ✓ Resin blemishes
- ✓ Timber structure flaws (diagonal grain, swirly grain, burls, bud traces)
- ✓ Sound discoloration

Surface appearance classification determined by **manufacturing process**

## ALLOWED

- ✓ Overlap ridges Allowed 2 pcs/m²
- ✓ Scratches, grooves, ridges
- ✓ Uneven sanding
- ✓ Face veneer oversanding  
Allowed up to 10% of total sheet's surface
- ✓ Glue stains  
Allowed up to 15% of total sheet's surface
- ✓ Knotting and patching:
  - a) Wooden inserts
  - b) Wedges  
Allowed when filled and complete
- ✓ Naprawy – wypełnienie syntetyczne  
Dopuszczalne w granicach kategorii, której najbardziej odpowiadają
- ✓ Edge defects caused by sanding, cutting (fringe), veneer shortage  
Allowed: up to 10 mm wide along the edge

## NOT ALLOWED

- ✗ Air pockets
- ✗ Metal inclusions



**Class III**

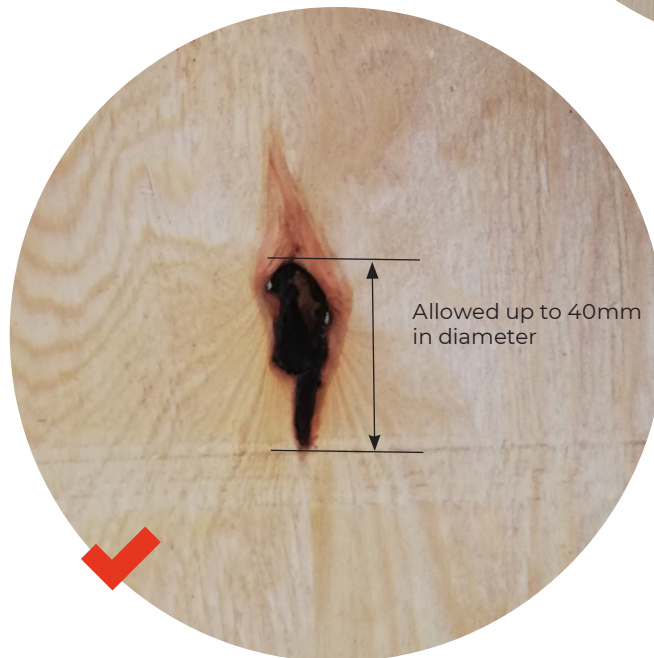


# Class III

Sound knots



Black knot



Synthetic filling





## Class III





# Class IV

Surface appearance classification determined by **wood characteristics**

## ALLOWED

- ✓ Pin knots
- ✓ Knots: sound, intergrown, light and dark  
Allowed without restrictions
- ✓ Black knots, intergrown knots, loose knots, knot holes  
Allowed without restrictions
- ✓ Open shakes, open splits in spliced veneer  
Allowed without restrictions in length and up to 25 mm in width
- ✓ Closed shakes
- ✓ Resin canals and pockets; inbark, light and dark  
Allowed without restrictions
- ✓ Resin blemishes
- ✓ Timber structure flaws (diagonal grain, swirly grain, burls, bud traces)
- ✓ Sound discoloration

Surface appearance classification determined by **manufacturing process**

## ALLOWED

- ✓ Overlap ridges  
Allowed without restrictions
- ✓ Scratches, grooves, ridges
- ✓ Uneven sanding
- ✓ Face veneer oversanding  
Allowed up to 20% of total sheet's surface
- ✓ Glue stains
- ✓ Knotting and patching:
  - a) Wooden inserts
  - b) Wedges  
Allowed when filled and complete
- ✓ Naprawy – wypełnienie syntetyczne Bez ograniczeń
- ✓ Edge defects caused by sanding, cutting (fringe), veneer shortage  
Allowed: up to 10 mm wide along the edge

## NOT ALLOWED

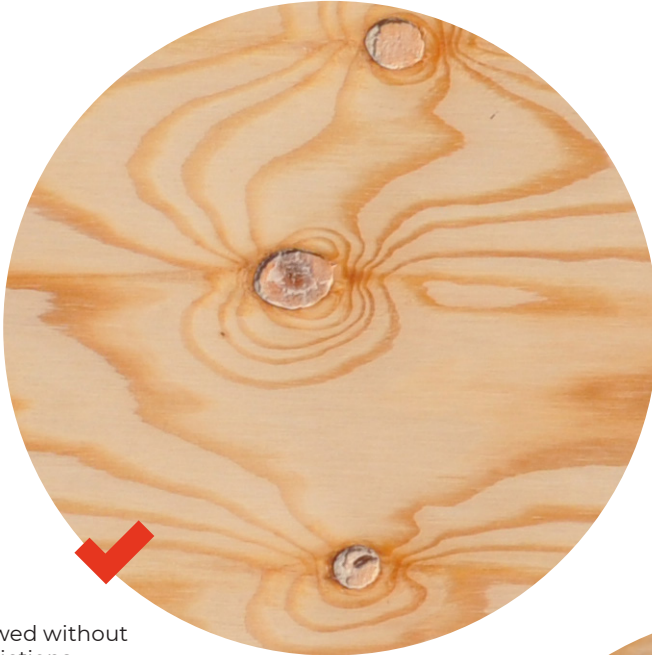
- ✗ Air pockets
- ✗ Metal inclusions

**Class IV**



# Class IV

Knot holes



Allowed without restrictions

Wooden wedge



Black knot



Allowed without restrictions

Knot filling and patching upon request only.



# Class IV

