



The world leader in birch plywood
production

CATALOG OF FILM FACED PLYWOOD GRADES*

*standard limitations in regard to film faced plywood
processing faults and defects, in accordance with Corporate Standard
STO 00255177-002-2014



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TABLE OF CONTENTS

Part 1. Description of grades

- Grade I (allowable defects) (page 4)
- Grade I (not allowable defects) (page 7)
- Grade II (allowable defects) (page 9)
- Grade II (not allowable defects) (page 12)
- Grade III (allowable defects) (page 13)

Part 2. Description of the defects

- 1. Coverage of wood grain structure, sound knots, inserts (page 17)
- 2. Delamination, tearing, absence, shedding of the film (page 18)
- 3. Temperature stains (page 19)
- 4. Overlaying (folds) of film (page 20)
- 5. Sticking of pieces of film (page 21)
- 6a. Burnt film (burnout) due to defects of the outer layer: cracks, damages, knot-holes (page 22)
- 6b. Burnt film (burnout) due to defects of the outer layer: non-smooth scuffleness (page 23)
- 6c. Burnt film (burnout) due to defects of the outer layer: stripes and stains from grinding (page 24)
- 7a. Traces of defects of the inner layer: knot-holes, openings (page 25)
- 7b. Traces of defects of the inner layer: open joint, cracks (page 26)
- 8. Trace of built-up or spliced veneer (page 27)
- 9. Stripes and stains from press plates (page 28)
- 10. Stripes and stains from film (page 29)
- 11. Local plywood blisters (page 30)
- 12. Veneer parts inserted glued in outer layer (page 31)
- 13. Marks from the press plates (page 32)
- 14. Dents (page 33)
- 15. Scratches (page 34)
- 16. Defects of cutting, chips on edges (page 35)
- 17. Down flows (page 36)
- 18. Lack of veneer sheet (page 37)
- 19. Local delamination in inner plywood layers (hidden bubble) (page 38)
- 20. Warping (page 39)



Part 1

DESCRIPTION OF GRADES




GRADE I / ALLOWABLE DEFECTS

Coverage of wood grain structure, sound knots, inserts

[GO TO DEFECT DESCRIPTION](#)

Defects of cutting, chips on edges

[GO TO DEFECT DESCRIPTION](#)

 allowed with length not more than 3 mm provided that it is coated with moisture-protective paint

Delamination, tearing, absence, shedding of the film

[GO TO DEFECT DESCRIPTION](#)

 allowed on one edge not more than 3 mm provided that it is coated with moisture-protective paint


Dents

[GO TO DEFECT DESCRIPTION](#)

 allowed with diameter of up to 6 mm in the quantity of not more than 1 pc./m² providing strong gluing of the film


Down flows

[GO TO DEFECT DESCRIPTION](#)

 allowable width is not more than 5 mm

Marks from the press plates

[GO TO DEFECT DESCRIPTION](#)

 allowed not more than 5% of the plywood sheet area



GRADE I / ALLOWABLE DEFECTS

Overlaying (folds) of film [GO TO DEFECT DESCRIPTION](#)

! allowed with length not exceeding 500 mm and width not more than 10 mm in the quantity 1 pc./m²

Sticking of pieces of film [GO TO DEFECT DESCRIPTION](#)

! allowed with the size not exceeding 30x30 mm or 10x100 mm in the quantity of 1 pc./m²

Stripes and stains from film [GO TO DEFECT DESCRIPTION](#)

! allowed not more than 15% of the plywood sheet area

Stripes and stains from press plates [GO TO DEFECT DESCRIPTION](#)

Trace of built-up or spliced veneer [GO TO DEFECT DESCRIPTION](#)

! allowed without damaging the laminated coating

Traces of defects of the inner layer: knot-holes, openings [GO TO DEFECT DESCRIPTION](#)

! allowed with the size not exceeding 25x25 mm in the quantity not more than 1 pc./m²



GRADE I / ALLOWABLE DEFECTS


Traces of defects of the inner layer: open joint, cracks

[GO TO DEFECT DESCRIPTION](#)

 allowed with width not more than 5 mm and length not exceeding 300 mm in the quantity not more than 1 pc./running meter

Warping

[GO TO DEFECT DESCRIPTION](#)

 In the plywood with thickness of up to 6.5 mm inclusive it is not taken into account, in the plywood with thickness of over 6.5 mm it is allowed with the deflection of not more than 15 mm per 1 m of the length of the diagonal of a plywood sheet



GRADE I / NOT ALLOWABLE DEFECTS

➖ **Burnt film (burnout) due to defects of the outer layer: cracks, damages, knot-holes** [GO TO DEFECT DESCRIPTION](#)

➖ **Burnt film (burnout) due to defects of the outer layer: non-smooth scuffleness** [GO TO DEFECT DESCRIPTION](#)

➖ **Burnt film (burnout) due to defects of the outer layer: stripes and stains from grinding** [GO TO DEFECT DESCRIPTION](#)

➖ **Lack of veneer sheet** [GO TO DEFECT DESCRIPTION](#)

➖ **Local delamination in inner plywood layers (hidden bubble)** [GO TO DEFECT DESCRIPTION](#)

➖ **Local plywood blisters** [GO TO DEFECT DESCRIPTION](#)

➖ **Scratches** [GO TO DEFECT DESCRIPTION](#)



GRADE I / NOT ALLOWABLE DEFECTS

 **Temperature stains** [GO TO DEFECT DESCRIPTION](#)

 **Veneer parts inserted glued in outer layer** [GO TO DEFECT DESCRIPTION](#)



GRADE II / ALLOWABLE DEFECTS

**Burnt film (burnout) due to defects of the outer layer:
cracks, damages, knot-holes**


[GO TO DEFECT DESCRIPTION](#)

**Burnt film (burnout) due to defects of the outer layer:
non-smooth scuffleness**

[GO TO DEFECT DESCRIPTION](#)

**Burnt film (burnout) due to defects of the outer layer:
stripes and stains from grinding**

[GO TO DEFECT DESCRIPTION](#)

 allowed not more than 25% of the plywood sheet area

Coverage of wood grain structure, sound knots, inserts

[GO TO DEFECT DESCRIPTION](#)


Defects of cutting, chips on edges

[GO TO DEFECT DESCRIPTION](#)

 allowed with length not more than 10 mm provided that it is coated with moisture-protective paint

Delamination, tearing, absence, shedding of the film

[GO TO DEFECT DESCRIPTION](#)


 allowed not more than 2% of the plywood sheet area provided that it is coated with moisture-protective



GRADE II/ALLOWABLE DEFECTS

Dents

[GO TO DEFECT DESCRIPTION](#)


 allowed with depth not exceeding 0.5 mm without damage to the coating

Down flows

[GO TO DEFECT DESCRIPTION](#)

Lack of veneer sheet

[GO TO DEFECT DESCRIPTION](#)

 allowed on one edge with width not exceeding 5 mm

Local plywood blisters

[GO TO DEFECT DESCRIPTION](#)

 allowed with diameter not exceeding 100 mm in the quantity of not more than 1 pc./m²

Marks from the press plates

[GO TO DEFECT DESCRIPTION](#)

Overlaying (folds) of film

[GO TO DEFECT DESCRIPTION](#)

Scratches

[GO TO DEFECT DESCRIPTION](#)

 allowed without damaging the laminated coating

Sticking of pieces of film

[GO TO DEFECT DESCRIPTION](#)



GRADE II / ALLOWABLE DEFECTS

Stripes and stains from film [GO TO DEFECT DESCRIPTION](#)

Stripes and stains from press plates [GO TO DEFECT DESCRIPTION](#)

Temperature stains [GO TO DEFECT DESCRIPTION](#)

 allowed without damaging the laminated coating


Trace of built-up or spliced veneer [GO TO DEFECT DESCRIPTION](#)

Traces of defects of the inner layer: knot-holes, openings [GO TO DEFECT DESCRIPTION](#)

Traces of defects of the inner layer: open joint, cracks [GO TO DEFECT DESCRIPTION](#)

Veneer parts inserted glued in outer layer [GO TO DEFECT DESCRIPTION](#)

Warping [GO TO DEFECT DESCRIPTION](#)

 in the plywood with thickness of up to 6.5 mm inclusive it is not taken into account, in the plywood with thickness of over 6.5 mm it is allowed with the deflection of not more than 15 mm per 1 m of the length of the diagonal of a plywood sheet



GRADE II / NOT ALLOWABLE DEFECTS

 Local delamination in inner plywood layers (hidden bubble)

[GO TO DEFECT DESCRIPTION](#)



GRADE III/ALLOWABLE DEFECTS

**Burnt film (burnout) due to defects of the outer layer:
cracks, damages, knot-holes**

[GO TO DEFECT DESCRIPTION](#)

**Burnt film (burnout) due to defects of the outer layer:
non-smooth scuffleness**

[GO TO DEFECT DESCRIPTION](#)

**Burnt film (burnout) due to defects of the outer layer:
stripes and stains from grinding**

[GO TO DEFECT DESCRIPTION](#)

Coverage of wood grain structure, sound knots, inserts

[GO TO DEFECT DESCRIPTION](#)

Defects of cutting, chips on edges

[GO TO DEFECT DESCRIPTION](#)

Delamination, tearing, absence, shedding of the film

[GO TO DEFECT DESCRIPTION](#)

Dents

[GO TO DEFECT DESCRIPTION](#)

Down flows

[GO TO DEFECT DESCRIPTION](#)



GRADE III/ALLOWABLE DEFECTS

Lack of veneer sheet [GO TO DEFECT DESCRIPTION](#)

Local delamination in inner plywood layers (hidden bubble) [GO TO DEFECT DESCRIPTION](#)

Local plywood blisters [GO TO DEFECT DESCRIPTION](#)

Marks from the press plates [GO TO DEFECT DESCRIPTION](#)

Overlaying (folds) of film [GO TO DEFECT DESCRIPTION](#)

Scratches [GO TO DEFECT DESCRIPTION](#)

Sticking of pieces of film [GO TO DEFECT DESCRIPTION](#)

Stripes and stains from film [GO TO DEFECT DESCRIPTION](#)

Stripes and stains from press plates [GO TO DEFECT DESCRIPTION](#)



GRADE III/ALLOWABLE DEFECTS

Temperature stains

[GO TO DEFECT DESCRIPTION](#)

Trace of built-up or spliced veneer

[GO TO DEFECT DESCRIPTION](#)

Traces of defects of the inner layer: knot-holes, openings

[GO TO DEFECT DESCRIPTION](#)

Traces of defects of the inner layer: open joint, cracks


[GO TO DEFECT DESCRIPTION](#)

Veneer parts inserted glued in outer layer

[GO TO DEFECT DESCRIPTION](#)

Warping

[GO TO DEFECT DESCRIPTION](#)

 in the plywood with thickness of up to 6.5 mm inclusive it is not taken into account, in the plywood with thickness of over 6.5 mm it is allowed with the deflection of not more than 15 mm per 1 m of the length of the diagonal of a plywood sheet



Part 2

DESCRIPTION OF THE DEFECTS



1. COVERAGE OF WOOD GRAIN STRUCTURE, SOUND KNOTS, INSERTS

Coverage of wood grain structure and timber faults are the outlines of sound knots, veneer grain structure and inserts on the surface of film faced birch plywood.



it is a defect that defines the plywood grade

Coverage of knot structure



Coverage of insert structure



Coverage of wood structure after grinding



Grades I, II, III
allowed



2. DELAMINATION, TEARING, ABSENCE, SHEDDING OF THE FILM

Absence of film is the areas of film faced birch plywood that are not coated with the film.



in the absence of film the measurements are taken only along plywood edge, width of the defective area is measured, otherwise width and length of the area not coated with film are measured and defined as the ratio between the total area of the damaged sections and the total area of a plywood sheet (expressed as a percentage)

Absence of film



Film tearing



Absence of film



Grade I

allowed on one edge not more than 3 mm provided that it is coated with moisture-protective paint

Grade II

allowed not more than 2% of the plywood sheet area provided that it is coated with moisture-protective

Grade III

allowed



3. TEMPERATURE STAINS

Stains on the surface are the film color changes (damaging the coating or/and not) due to premature hardening of the film without pressure.



it is a defect that defines the plywood grade

**Temperature stains with integrity
damage of laminated coating**



**Temperature stains without integrity
damage of laminated coating**



Grade I
not allowed

Grade II
allowed without damaging
the laminated coating

Grade III
allowed



4. OVERLAYING (FOLDS) OF FILM

Overlaying of film is a local thickening caused by overlap of the film on the surface of plywood.



length and width are measured, expressed in mm

Overlaying of film



Folds of film



Folds of film



Grade I

allowed with length not exceeding 500 mm and width not more than 10 mm in the quantity 1 pc./m²

Grades II, III

allowed



5. STICKING OF PIECES OF FILM

Sticking of pieces of film is the defect characterized by film pieces sticking to the plywood outer surface in the process of laminating.



length and width are measured, expressed in mm

Sticking of film



Grade I

allowed with the size not exceeding
30x30 mm or 10x100 mm
in the quantity of 1 pc./m²

Grades II, III

allowed



6a. BURNT FILM (BURNOUT) DUE TO DEFECTS OF THE OUTER LAYER: CRACKS, DAMAGES, KNOT-HOLES

Burnt film (burnout) is the violation of the integrity of the film due to the outer layer defects (knots, holes, cracks, etc.).

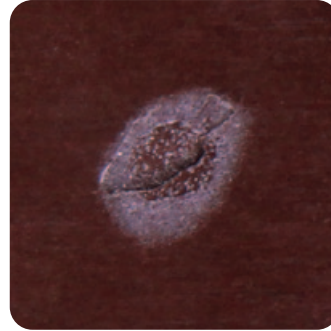


length and width are measured, expressed in mm

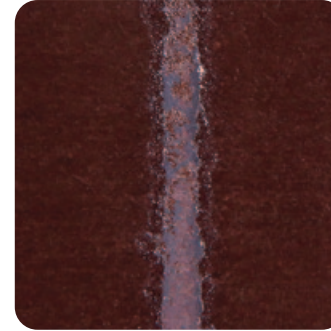
Burnout due to a defect of the outer layer (knot-hole)



Burnout due to a defect of the outer layer (dent)



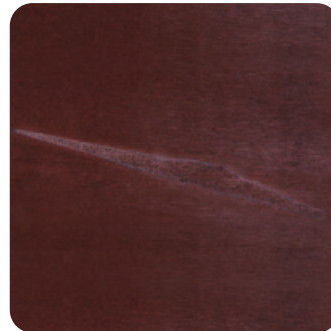
Burnout caused by "soldering iron"



Burnout due to a defect of the outer layer (an insert fallen out)



Burnout due to a defect of the outer layer (damage to the plywood)



Grade I
not allowed

Grades II, III
allowed



6b. BURNT FILM (BURNOUT) DUE TO DEFECTS OF THE OUTER LAYER: NON-SMOOTH SCUFFLENESS

Burnt film (burnout) is the violation of the integrity of the film in hollows on the surface resultant from local removal of wood when processing.



The length and width of the sections affected by non-smooth scuffleness are measured, expressed as a percentage of the plywood sheet area.



Grade I
not allowed

Grades II, III
allowed



6c. BURNT FILM (BURNOUT) DUE TO DEFECTS OF THE OUTER LAYER: STRIPES AND STAINS FROM GRINDING

Stripes from grinding are violations of the integrity of the film due to uneven plywood thickness.

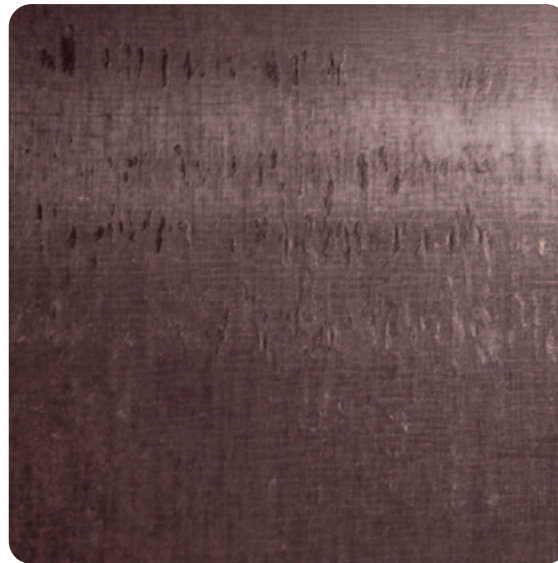


length and width are measured, defined as the ratio between the total area of the damaged sections and the total area of a plywood sheet (expressed as a percentage)

Burnout due to a defect of the outer layer (stain from grinding)



Burnout due to a defect of the outer layer (stain from grinding)



Burnout due to a defect of the outer layer (stripe from grinding)



Grade I
not allowed

Grade II
allowed not more than 25%
of the plywood sheet area

Grades II, III
allowed



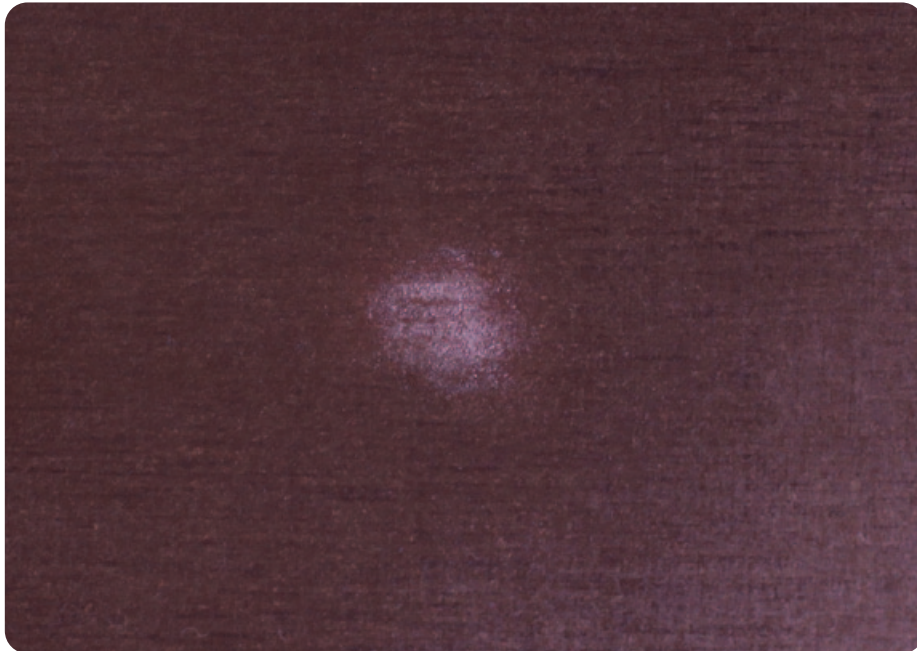
7a. TRACES OF DEFECTS OF THE INNER LAYER: KNOT-HOLES, OPENINGS

Traces of defects of the inner layer are the violations of the integrity of the film due to the inner layer defects (knots, openings, etc.).



length and width are measured, expressed in mm

Burnout due to a defect of the inner layer (knot-hole)



Grade I

allowed with the size not exceeding
25x25 mm in the quantity
not more than 1 pc./m²

Grades II, III

allowed



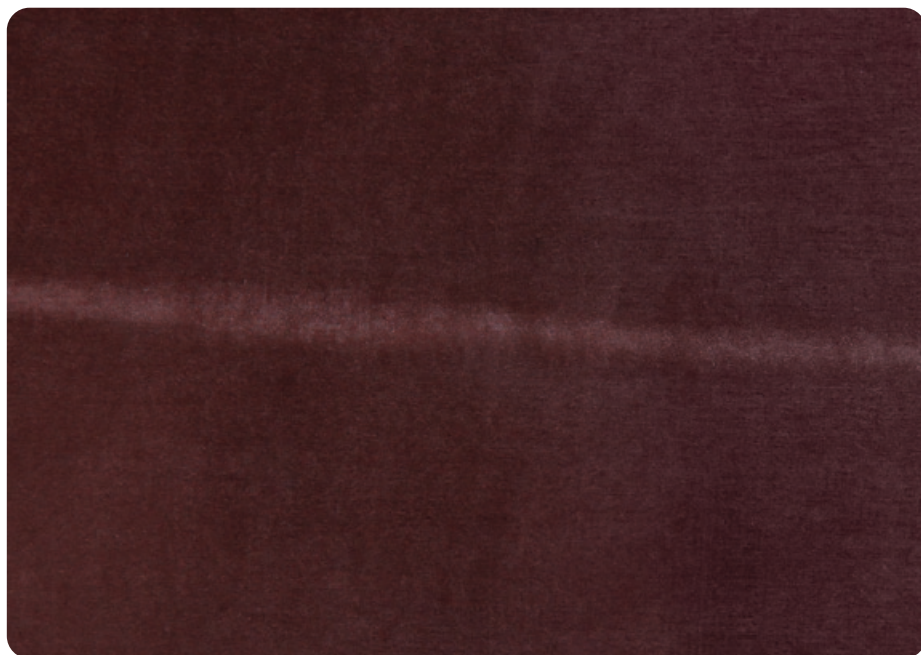
7b. TRACES OF DEFECTS OF THE INNER LAYER: OPEN JOINT, CRACKS

Traces of defects of the inner layer are the violations of the integrity of the film due to the inner layer defects (open joint, cracks, etc.).



length and width are measured, expressed in mm

Burnout due to a defect of the inner layer (cracks, open joint)



Grade I

allowed with width not more than 5 mm
and length not exceeding 300 mm
in the quantity not more than 1 pc./running meter

Grades II, III

allowed



8. TRACE OF BUILT-UP OR SPLICED VENEER

Trace of built-up or spliced veneer is the imprint on the surface of film faced plywood that was formed due to using built-up or spliced veneer.



width is measured, expressed in mm

Trace of built-up veneer



Trace of spliced veneer



Grade I
allowed without damaging
the laminated coating

Grades II, III
allowed



9. STRIPES AND STAINS FROM PRESS PLATES

Strips of plates press are stripes and stains on the surface of film faced plywood due to accumulation of dirt on the press plates.



length and width are measured, defined as the ratio between the total area of the sections with dirty marks and the total area of a plywood sheet (expressed as a percentage)



Grades I, II, III
allowed



10. STRIPES AND STAINS FROM FILM

Stripes and spots from the film are the film faced plywood surface sections of a non-standard color due to emission of volatile substances of the film during pressing.



length and width are measured, defined as the ratio between the total area of the sections of a non-standard color and the total area of a plywood sheet (expressed as a percentage)



Grade I

allowed not more than
15% of the plywood sheet area

Grades II, III

allowed

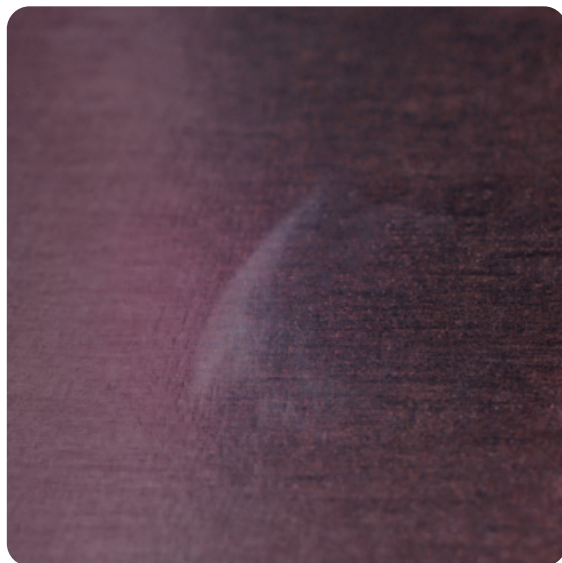


11. LOCAL PLYWOOD BLISTERS

Local plywood blisters on the surface of the plywood are partial delamination of the film from the surface of plywood.



length and width are measured, expressed in mm



Grade I
not allowed

Grade II
allowed with diameter not exceeding
100 mm in the quantity of not more
than 1 pc./m²

Grade III
allowed

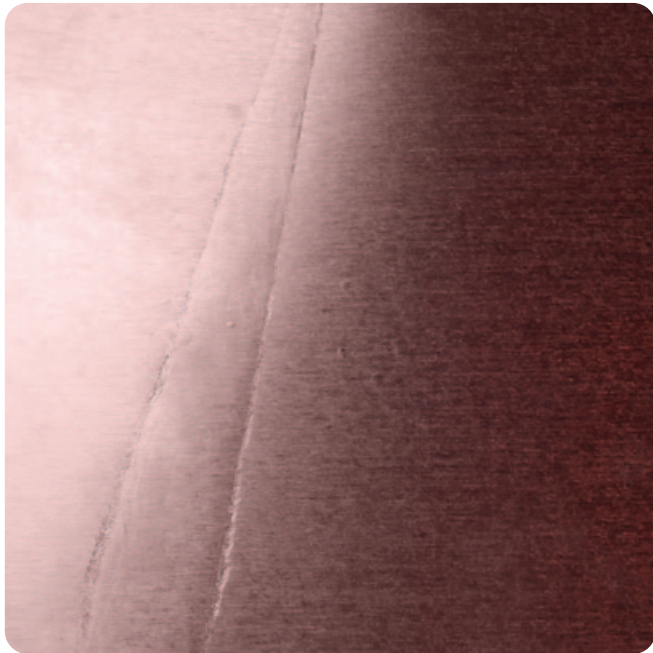


12. VENEER PARTS INSERTED GLUED IN OUTER LAYER

Veneer parts inserted glued in outer layer are the veneer parts inserted glued in the outer layer of plywood before lamination.



their presence is a characteristic that defines the plywood grade



Grade I
not allowed

Grades II, III
allowed



13. MARKS FROM THE PRESS PLATES

Marks from the press plates are the local bulges on the surface of plywood formed due to defects on the lamination press plates.



length and width are measured, defined as the ratio between the total area of the damaged sections and the total area of a plywood sheet (expressed as a percentage)



Grade I
allowed not more than 5%
of the plywood sheet area

Grades II, III
allowed



14. DENTS

Dent is a local indentation of the outer layer without damage to the laminated coating.



dent depth is measured

Dent (made by conveyor chains)



Dent (from rollers)



Dent



Grade I

Allowed with diameter of up to 6 mm in the quantity of not more than 1 pc./m² providing strong gluing of the film

Grade II

Allowed with depth not exceeding 0.5 mm without damage to the coating

Grade III

allowed



15. SCRATCHES

Scratches are the damage to the laminated coating of plywood made with a sharp object in a form of a long narrow hollow or local denting of the outer layer damaging the laminated coating.



their presence is a characteristic that defines the plywood grade

Scratch damaging the laminated coating



Scratch damaging the laminated coating



Grade I
not allowed

Grade II
allowed without damaging
the laminated coating

Grade III
allowed



16. DEFECTS OF CUTTING, CHIPS ON EDGES

Defects of cutting and chips on edges constitute the defect characterized by the absence of the laminated coating on the edges of a plywood sheet.

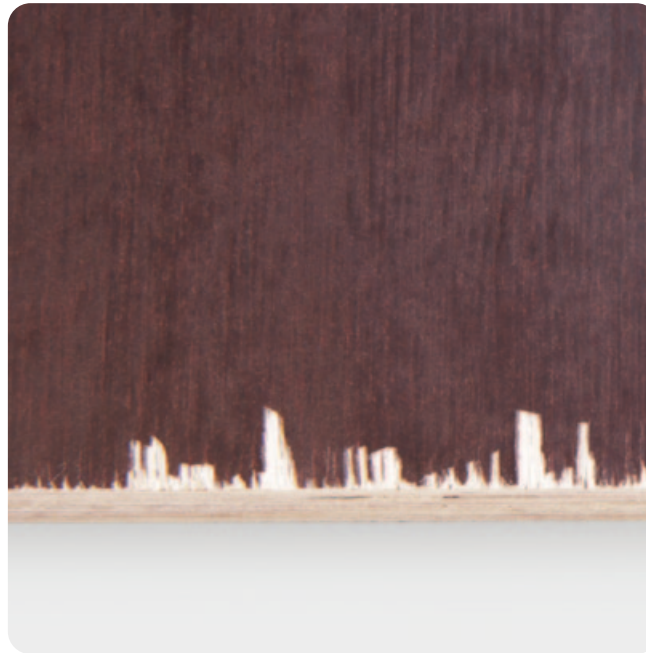


length of the defect is measured

Chips up to 3 mm



Chips up to 10 mm



Grade I

allowed with length not more than 3 mm provided that it is coated with moisture-protective paint

Grade II

allowed with length not more than 10 mm provided that it is coated with moisture-protective paint

Grade III

allowed



17. DOWN FLOWS

Paint down flows constitute the defect characterized by the paint getting on the surface of a plywood sheet.



width is measured



Grade I
allowable width
is not more than 5 mm

Grades II, III
allowed



18. LACK OF VENEER SHEET

Lack of veneer sheet is the defect characterized by the absence of some part of the inner layer veneer except for knots and splits on the sawed ends.



depth is measured



Grade I
not allowed

Grade II
allowed on one edge
with width not exceeding 5 mm

Grade III
allowed

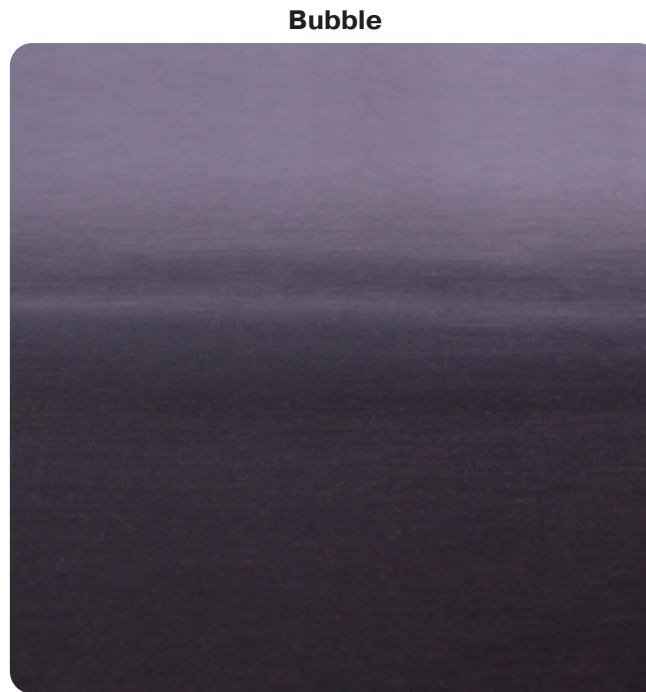
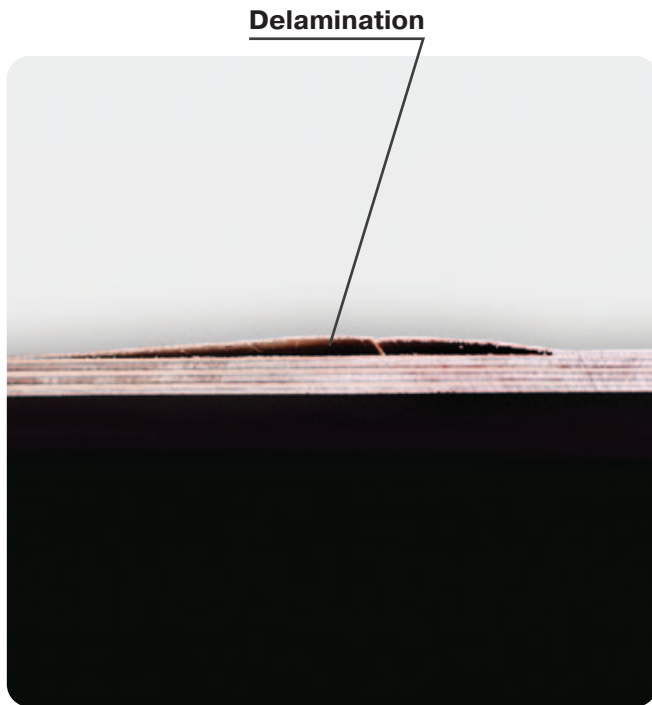


19. LOCAL DELAMINATION IN INNER PLYWOOD LAYERS (HIDDEN BUBBLE)

Delamination is splitting of two adjacent veneer layers along glue layer.



it is a defect that defines the plywood grade



Grades I, II
not allowed

Grade III
allowed

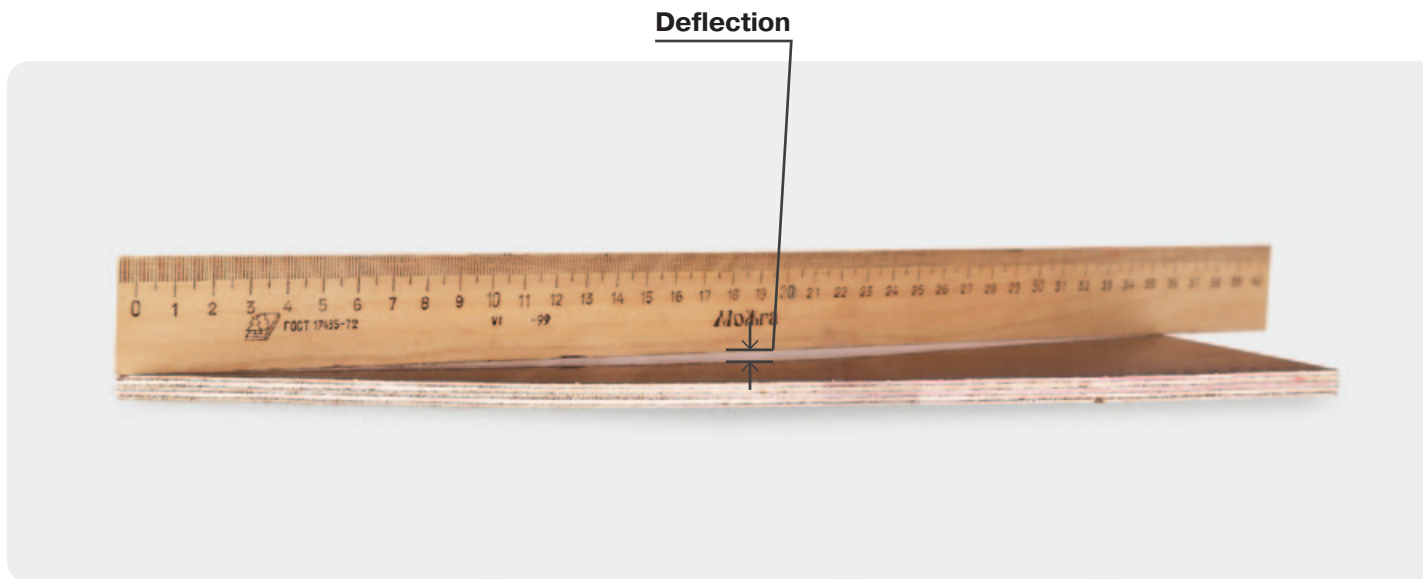


20. WARPING

Warping is plywood panel surface twisting.



It is measured by laying a ruler diagonally on a panel placed on a flat surface and measuring the maximum deflection



Grades I, II, III

In the plywood with thickness of up to 6.5 mm inclusive it is not taken into account, in the plywood with thickness of over 6.5 mm it is allowed with the deflection of not more than 15 mm per 1 m of the length of the diagonal of a plywood sheet

