LIMITED LIABILITY COMPANY SVEZA-Les

COMPANY STANDARD

SVEZA OIL HARDWOOD PLYWOOD
Technical specifications

STO 52654419-012-2018

Saint Petersburg
2018

Preface

The development goals and objectives as well as usage of company standards in the Russian Federation are defined by Federal Law No. 184-FZ “On Technical Regulation” dated December 27, 2002 and Federal Law No. 162-FZ “On Standardisation in the Russian Federation” dated June 29, 2015.

The development and presentation rules are established by GOST R 1.0-2012 “Standardisation in the Russian Federation. Basic provisions” and GOST R 1.4-2004 “Standardisation in the Russian Federation. Standards of organisations. General” taking into account GOST R 1.5-2012 “Standardisation in the Russian Federation. National standards. Rules of structure, drafting, presentation and indication”.

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COMPANY STANDARD

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Технические условия

SVEZA OIL Hardwood Plywood
Technical requirements

Effective date 20 June, 2018

1 SCOPE

This company standard (hereinafter referred to as the Standard) applies to SVEZA OIL hardwood plywood (hereinafter referred to as SVEZA OIL plywood).

SVEZA OIL plywood is multipurpose plywood with outer plies of birch veneer intended for 2 to 5 cycle concreting works.

2 NORMATIVE REFERENCES

This Standard includes normative references to the following standards:

GOST 427-75 Measuring metal rules. Specifications

GOST 2140-81 Visible wood defects. Classification, terms and definitions, measurement methods

GOST 3749-77 Checking 90° squares. Specifications

GOST 6507-90 Micrometers. Technical specifications

GOST 7016-2013 Products of wood and wood materials. Roughness parameters

GOST 7502-98 Measuring metal tapes. Technical specifications

GOST 8925-68 Flat clearance gauges for machine retaining devices. Design

GOST 9620-94 Laminated glued wood. Sampling and general requirements in testing

GOST 9621-72 Laminated glued wood. Methods for determination of physical properties

GOST 9624-2009 Laminated glued wood. Method for determination of shear strength

GOST 9625-2013 Laminated glued wood. Methods for determination of ultimate and modulus of elasticity in static bending

GOST 11358-89 Dial-type thickness gauges and dial-type wall thickness gauges graduated in 0,01 and 0,1 mm. Specifications

GOST 15612-2013 Products from wood and wood materials. Methods for determination of roughness parameters

GOST 18321-73 Statistical quality control. Item random sampling methods

GOST 27678-2014 Wood-based panels and plywood. Perforator method for determination of formaldehyde content

GOST 30255-2014 Furniture, timber and polymers. The method for determination of formaldehyde and other volatile chemicals in the air of climatic chambers

GOST 30427-96 Plywood for general use. Classification of veneer surfaces by appearance

GOST 32155-2013 Wood-based panels and plywood. Determination of formaldehyde release by the gas analysis method

STO 52654419-001-2018 General Purpose Birch Plywood. Technical specifications

N o t e: when using this Standard it is advisable to check the validity of the reference standards in the “National Standards” information index.

(Amended version, Ed. No. 1).

3 CLASSIFICATION AND SIZES

3.1 In terms of water resistance of adhesive bonding, SVEZA OIL plywood is an exterior (EXT / ФСФ) type plywood characterised by an increased adhesive bonding resistance to water, bonded with phenol-formaldehyde glues and intended for interior and exterior use.

Note: SVEZA OIL plywood belongs to the EXT formaldehyde emission group.

p 3.1 (Amended version, Ed. No. 1).

3.2 Based on its surface appearance, SVEZA OIL plywood is divided into the following grades:

- OIL CP/CP (III/III);
- OIL CP/C (III/IV).

A grade designation includes both, Latin letters and Roman numerals.

3.3 In terms of surface machining SVEZA OIL plywood is NS / НШ, unsanded plywood.

3.4 Sizes

3.4.1 SVEZA OIL plywood has a size of 1,500 x 750 mm.

The length and width of SVEZA OIL plywood sheets should correspond to the values specified in Table 1.

T a b l e 1

In millimeters

Description	Size	Maximum deviation
Length	1,500	±4.0
Width	750	±3.0
N o t e s: 1. SVEZA OIL plywood may be produced in other sizes and with other maximum deviations as agreed upon between the manufacturer and the customer. 2. SVEZA OIL plywood sheet length is determined parallel to grain direction of outer plies		

3.4.2 The SVEZA OIL plywood thickness and number of plies should correspond to the values specified in Table 2.

T a b l e 2

In millimeters

Nominal plywood thickness	Number of plies	Maximum deviation	Thickness variation, not more than
12	9	+ 1.1 - 0.6	1.0
15	11	+ 1.2 - 0.7	1.5
18	13	+ 1.3 - 0.8	
21	15	+1.0 - 1.1	
Note: SVEZA OIL plywood may be produced in other thickness, number of plies and maximum deviations as agreed upon between the manufacturer and the customer.			

3.4.3 SVEZA OIL plywood sheets should be cut at a right angle.

The out of square length should not exceed 2 mm per 1 m of the sheet edge length when controlled according to par. 6.4.1.

The difference in the lengths of the sheet diagonals should not exceed 2 mm per 1 m of the sheet edge length when controlled according to par. 6.4.2.

3.4.4 The deviation from straightness of the edges should not exceed 2 mm per 1 m of the sheet length.

3.5 The SVEZA OIL plywood designation should include the following information:

- product name;
- category;
- combination of the grades of the outer plies veneer indicated with Latin letters and Roman numerals;
- emission class;
- surface machining type;
- sizes;

- identifier of this Standard.

Example of designation for SVEZA OIL hardwood plywood, EXT / ФСФ category, OIL CP/CP (III/III) grade, E1 emission class, unsanded, 1,500 mm long, 750 mm wide and 15 mm thick:

Фанера SVEZA OIL лиственная / SVEZA OIL Hardwood Plywood,
EXT / ФСФ, OIL CP/CP (III/III), E1, NS / НШ, 1,500 x 750 x 15
STO 52654419-012-2018

4 TECHNICAL REQUIREMENTS

4.1 Characteristics

4.1.1 Birch veneer up to 2.0 mm thick is used to produce outer and inner plies of SVEZA OIL plywood.

As agreed upon between the manufacturer and the customer, aspen veneer of a thickness of 1.5 to 3.0 mm may be used for production of SVEZA OIL inner plies.

4.1.2 Paraffin oil or a mixture of paraffin and residual petroleum oils (hereinafter referred to as the “oil”) is used for coating the surface of SVEZA OIL plywood.

4.1.3 SVEZA OIL plywood ends should be coated with water-based acrylic paint for plywood protection against moisture.

As agreed upon between the manufacturer and the customer, sawn ends may be coated with oil or left uncoated.

4.1.4 No wood and machining defects that exceed the limits specified in Appendix A are permitted in outer plies of SVEZA OIL plywood.

The terms and definitions of wood and machining defects are according to GOST 30427 and Appendix B.

4.1.5 Wood and machining defects in inner plies of SVEZA OIL plywood are permitted if they do not affect its quality and sizes specified in this Standard.

4.1.6 SVEZA OIL plywood outer plies may be composed of infinite number of veneer leaves not matching in colour.

4.1.7 Veneer plugs of different shapes and sizes may be used to repair knots, holes and checks. To repair defects that are up to 30 mm wide, rectangular veneer plugs may be used throughout the entire length of the defect.

The veneer plugs should fit in tightly, conform to the surface properties and match wood species of the outer ply of SVEZA OIL plywood.

The fillers should match the plywood surface in colour, should not crumble during SVEZA OIL plywood machining and bending and should not crack.

4.2 The formaldehyde content in and the formaldehyde release from SVEZA OIL plywood in the indoor air should correspond to the values specified in Table 3.

T a b l e 3

Emission class	Formaldehyde content	Formaldehyde release	
	Perforator method, mg/100g oven dry board	Chamber method, mg / m^3 of air	Gas analysis method, mg / m^2*h
E 0.5	Up to 4.0 inclusive	Up to 0.01 inclusive	Up to 1.5 inclusive
E1	Up to 1.5 inclusive	Over 0.01 and up to 0.124 inclusive	Over 1.5 and up to 3.5 inclusive or less than 5.0 within 3 days after production

Table 3 (Amended version, Ed. No. 2).

4.3 The physical and mechanical properties of SVEZA OIL plywood are given in Tables 4 and 5.

T a b l e 4

Item	Values of physical and mechanical properties
1 Moisture content, %	5 – 12
2 Density: - for SVEZA OIL plywood with outer and inner plies of birch veneer, kg/m^3, not less than - for SVEZA OIL plywood with outer plies of birch veneer and inner plies of aspen veneer, kg/m^3, not less than	 600 450
3 Ultimate strength in static bending: - parallel to grain of outer plies, MPa, not less than - perpendicular to grain of outer plies, MPa, not less than	 60 30
4 Modulus of elasticity in static bending: - parallel to grain, MPa, not less than - perpendicular to grain, MPa, not less than	 6,000 3,000
Note: SVEZA OIL plywood shipped from the manufacturer's warehouse should have the moisture content values specified above.	

T a b l e 5

Average value of the ultimate shear strength along bondline, MPa	Wood failure, %
Over 0.2 up to and including 0.4	Greater than or equal to 80
Over 0.4 up to and including 0.6	Greater than or equal to 60
Over 0.6 but less than 1.0	Greater than or equal to 40
1.0 or more	-

N o t e s:
1. Before testing, the test pieces of SVEZA OIL plywood samples are pre-treated by one of the following ways:
1.1 Immersion for 1 h in boiling water;
1.2 Immersion for 6 h in boiling water;
1.3 Immersion for 4 h in boiling water, then drying in the ventilated drying oven for 16 h to 20 h at (60 ± 3) °C, repeated immersion for 4 h in boiling water, cooling in water at (20 ± 3) °C for 1 hour;
1.4 Immersion for (72 ± 1) h in boiling water followed by cooling in water for 1 h at (20 ± 3) °C – once per quarter;
1.5 Immersion for 24 h in water at (20 ± 3) °C – once per quarter.
Methods 1.3, 1.4, 1.5 are used to prepare film-faced plywood for testing in case of testing new resins.
The pre-treatment of test pieces before testing is agreed upon between the manufacturer and the client.
2. The percentage of wood failure is determined visually.
3. Bonding quality is tested in different glue lines by agreement between the manufacturer and the client.

Table 5 (Amended version, Ed. No. 1).

4.4 SVEZA OIL plywood volume is specified in cubic metres. The volume of one sheet is calculated without rounding. The volume of a plywood pack and batch is calculated to an accuracy of 0.001 m^3. The area of a plywood sheet is calculated to an accuracy of 0.01 m^2, the area of sheets in a batch – to an accuracy of 0.5 m^2.

4.5 The marking is applied in the corner of the long or short end of each sheet of SVEZA OIL plywood in the form of a stamp or text without margins.

If SVEZA OIL plywood ends are coated with water-based acrylic paint, the marking is applied with white paint.

If SVEZA OIL plywood ends are coated with oil or have no coating, the marking is applied with black or purple paint.

The marking shall contain the following information:

- manufacturer (number or name);
- short designation of the products in accordance with the Declaration of performance (according to DIN EN 13986 [11]);
- plywood grade SVEZA OIL.

Note: for example, 45 EXT OIL CP/CP (III/III).

As agreed upon between the manufacturer and the customer, it is permitted:

- not to apply marking to SVEZA OIL plywood sheets;
- to add additional information to the mandatory marking.

4.6 Stacking of SVEZA OIL plywood

SVEZA OIL plywood sheets should be stacked in packs of 400 and 600 mm high sorted by size and thickness.

As agreed upon between the manufacturer and the customer, SVEZA OIL plywood sheets may be stacked in packs of other heights.

4.7 Packaging and marking of ready for shipment SVEZA OIL plywood packs.

4.7.1 Packs of SVEZA OIL plywood should have proper packaging to ensure its integrity and prevent damage during transportation.

The main methods and types of packaging are regulated by SVEZA-Les LLC. As agreed upon between the manufacturer and the customer, there may be used other methods and types of plywood packaging.

4.7.2 The marking to packaged packs of SVEZA OIL plywood is applied in the form of labels. The text is written in the Russian and/or English language and the labels are placed parallelly or perpendicularly on two sides of the packaging. The text of both labels contains the same information:

- trademark;
- product name – SVEZA OIL Hardwood Plywood;
- sizes and thickness of SVEZA OIL plywood and thickness tolerances (if required);
- SVEZA OIL plywood grade – OIL CP/CP (III/III) or OIL CP/C (III/IV);
- category of SVEZA OIL plywood – EXT / ФСФ;
- SVEZA OIL plywood surface machining – NS / НШ;
- sheets per pack;
- shift;
- SVEZA OIL plywood production date;
- emission class;
- order No. under Special Terms and Conditions (to be applied as agreed upon between the manufacturer and the customer);
- the regulatory technical document based on which SVEZA OIL plywood is produced;
- manufacturer name and address;
- certification markings and standard compliance mark;
- pictorial marking for handling of goods: “Keep dry” and “Use no hooks”;
- barcode if a data collection terminal (scanner) is available.

For convenience in warehouse operations additional marking may be applied in the form of a label or using a stencil.

p. 4.5 Paragraph 4 (Amended version, Ed. No. 2).
p. 4.5, 4.7 (Amended edition, Ed. No. 1).

5 ACCEPTANCE RULES

5.1 SVEZA OIL plywood is accepted in batches.

A certain number of SVEZA OIL plywood panels of the same thickness and size is considered a batch.

A batch must be formalized by a common document containing:

- trademark;
- manufacturer name and address;
- SVEZA OIL plywood designation;
- batch size
- a reference to the technical document according to which SVEZA OIL plywood is produced.

5.2 SVEZA OIL plywood sheets quality and sizes are checked by selective sampling. The selective check involves random sampling of SVEZA OIL plywood sheets according to GOST 18321 in the number specified in Table 6.

T a b l e 6

In sheets

Batch size	Controlled value under paragraphs			
	3.4.1; 3.4.2; 3.4.3; 3.4.4		4.1.4; 4.1.5; 4.1.6; 4.1.7	
	Sample size	Acceptance number	Sample size	Acceptance number
Up to 500	8	1	13	1
501 to 1,200	13	1	20	2
1,201 to 3,200	13	1	32	3
3,201 to 10,000	20	2	32	3

5.3 Moisture content, density, ultimate shear strength along bondline, ultimate strength in static bending parallel and perpendicular to grain of outer plies, and modulus of elasticity in static bending parallel and perpendicular to grain of outer plies should be monitored for each thickness and number of plies of SVEZA OIL plywood at least once a month.

As agreed upon between the manufacturer and the customer, such monitoring may be performed for each batch by selecting 0.1% of sheets from a batch (at least one sheet).

5.4 To control the formaldehyde emission, one panel of SVEZA COLOR plywood is sampled from any sample size.

The formaldehyde release is checked at least once every 7 days within the EXT formaldehyde emission group checks**.**

5.5 It is allowed to apply the results of physical and mechanical tests as well as formaldehyde release test of plywood under STO 52654419-001 (of CP/CP (III/III) and CP/C (III/IV) grades) to SVEZA OIL plywood submitted for acceptance provided that this plywood types were produced within the same period of time.

5.6 A batch is considered to meet the requirements of this standard and accepted if representative samples show the following results:

- the number of SVEZA OIL plywood panels not compliant in dimensions, squareness, edge straightness, wood and manufacturing defects is less than or equal to the acceptance number specified in Table 6;
- all SVEZA OIL plywood panels are free of bubbles, delamination, and bark;
- physical and mechanical properties correspond to the values specified in Tables 4 and 5;
- formaldehyde release value complies with the limits set up in Table 3.

p. 5.1, 5.4, 5.5, 5.6 (Amended version, Ed. No. 1).

6 INSPECTION METHODS

6.1 Sampling is according to GOST 9620, GOST 27678, GOST 30255, GOST 32155, [1] - [2].

6.2 The SVEZA OIL plywood length and width are measured to a tolerance of 1 mm at two points parallel to the edges at least 100 mm from the edges using a metal measuring tape in accordance with GOST 7502. The actual sheet length (width) is the arithmetic mean of two measurement results.

6.3 Thickness is measured at a distance of at least 25 mm from the edges in the middle of each side of a sheet.

The actual sheet thickness is the arithmetic mean of four measurement results.

The following instruments are used to measure thickness:

- a thickness gauge according to GOST 11358 graduated not more than in 0.1 mm;
- a micrometer according to GOST 6507 graduated not more than in 0.1 mm.

The thickness variation in one sheet of SVEZA OIL plywood is defined as difference between the maximum and the minimum thickness values after four measurements.

6.4 Out of square length of SVEZA OIL plywood sheet

6.4.1 The out-of-straightness of SVEZA OIL plywood sheet is measured in accordance with GOST 30427. It is measured using a try square in accordance with GOST 3749 and determined by measuring the maximum deviation of the sheet edges from the try square surface using a metal ruler in accordance with GOST 427 to a tolerance of 1 mm.

6.4.2 It is permitted to determine the out of square length based on the difference of the lengths of the sheet diagonals measured using a metal measuring tape graduated in 1 mm in accordance with GOST 7502.

6.5 The deviation from straightness of SVEZA OIL plywood sheet edges is determined by measuring the maximum gap between the sheet edge and the edge of the metal ruler using a gauge in accordance with GOST 8925 to a tolerance of 0.2 mm.

6.6 The warp is according to GOST 30427.

6.7 The moisture content is according to GOST 9621, [3].

6.8 The density is according to GOST 9621, [4].

6.9 The ultimate shear strength along bondline is according to GOST 9624, [5].

6.10 The ultimate strength and modulus of elasticity in static bending are according to GOST 9625, [6].

6.11 Formaldehyde content is determined according to GOST 27678 (this method is used as an arbitration method), formaldehyde release into the environment is determined according to GOST 30255, GOST 32155 and [1].

6.12 The surface roughness is according to GOST 15612.

6.13 The measurement of wood and machining defects is according to GOST 30427 and GOST 2140.

p. 6.11 (Amended version, Ed. No. 1).

7 TRANSPORTATION AND STORAGE

7.1 SVEZA OIL plywood should be transported in fully enclosed vehicles in accordance with the rules for carriage of goods by the respective mode of transport.

The transportation conditions should prevent any increase of the SVEZA OIL plywood moisture content that may result in changes of geometric, physical, qualitative characteristics of the plywood.

7.2 Storage of SVEZA OIL plywood.

SVEZA OIL plywood in an appropriate packaging should be stacked flat on a level surface on pallets or wooden battens indoors at a temperature of minus 40 °C to plus 50 °C and relative humidity of not more than 80%.

8 MANUFACTURER'S WARRANTY

The manufacturer guarantees that SVEZA OIL plywood quality complies with requirements of this Standard provided that the transportation and storage conditions are met.

The guaranteed shelf life of SVEZA OIL plywood of EXT / ФСФ category is 5 years from the day of receipt by the customer.

When SVEZA OIL plywood is intended for further processing or treatment, it is recommended that the manufacturer should be contacted to specify the plywood properties and specifications.

9 SAFETY REQUIREMENTS AND ENVIRONMENTAL PROTECTION

9.1 The content of hazardous chemicals released when items made of SVEZA OIL plywood are used should not exceed the values specified by the requirements of [7], [8], [9].

9.2 SVEZA OIL plywood should be produced with the use of the materials and components permitted for use by the national sanitary and epidemiological supervision authorities.

9.3 The personnel engaged in SVEZA OIL plywood production should be at least 18 years old and have no medical contraindications. Medical examinations are conducted in accordance with the effective orders of the Ministry of Health of the Russian Federation.

9.4 The personnel engaged in SVEZA OIL plywood production should be provided with personal protective equipment according to the applicable regulations in compliance with Order of the Ministry of Labour of the Russian Federation No. 665N dated November 17, 2016.

9.5 Specific activity of Cesium 137 in SVEZA OIL plywood should not exceed the hygiene standards specified by the requirements of [10].

9.6 SVEZA OIL plywood usually has a long service life and there are several disposal methods used. The disposal method for SVEZA OIL plywood should be selected taking into account the disposal requirements established by the legislation of different countries.

10 OPERATION GUIDELINES

10.1 Cutting of SVEZA OIL plywood

Band or circular saws should be used to cut SVEZA OIL plywood into parts.

The proper cutting procedure should be followed to produce a clean cut: cut perpendicular to grain first and then parallel to grain. This method prevents corner splintering and reduces the size and amount of chips on the surface.

When a circular saw is used we recommend cutting at a high speed and a low feed rate.

Always use special types of acrylate-based waterborne paint or other sealant for treating the sawn ends of SVEZA OIL plywood after cutting to prevent moisture absorption.

10.2 Drilling of SVEZA OIL plywood

All holes made during the installation work should be filled with acrylate-based waterborne paint or other sealant to prevent moisture ingress in SVEZA OIL plywood and sheet surfaces should be treated with a waterproofing agent.

Use a sharp drill bit with a front cutting blade to produce a drill hole with smooth and clean edges.

Use a backing sheet to prevent any splintering on the reverse side of the plywood.

Instead of nails it is recommended to use screw nails or special screws to prevent SVEZA OIL plywood splitting. The recommended distance from the sheet edge to a nail is 12-15 mm.

10.3 If SVEZA OIL plywood is used in the formwork for white box and/or final finishes, it is recommended to perform a test concrete casting on a small area to evaluate the result.

10.4 Upon completion of formwork construction SVEZA OIL plywood surface should be carefully cleaned from any concrete mix residues to prevent damage to the outer oil-coated ply.

10.5 After a long use the moisture content in SVEZA OIL plywood increases significantly leading to plywood strength properties impairment and may result in uneven size changes and deformation (swelling) caused by the natural ability of wood to absorb moisture from the environment, which is not a defect.

Thus, SVEZA OIL plywood should be dried between cycles. The plywood should be dried naturally to prevent external deformations.

APPENDIX A
(mandatory)

Limits for wood and machining defects of outer plies of SVEZA OIL plywood

The limits for wood and machining defects of outer plies of SVEZA OIL plywood are specified in Table A.1.

Table A.1

Wood and manufacturing defects	CP (III) grade	C (IV) grade
3. Pin knots	allowed	
2. Sound knots, intergrown, light and dark are allowed	with crack up to 1.5 mm wide	allowed
3. Partially intergrown knots	Allowed in total with intergrown knots, up to 15 mm in diameter, not exceeding 10 pieces/m^2	allowed up to 40 mm in diameter without quantity limitation
3. Non-adhering and partially adhearing knots, knot holes, (without inbarks)	allowed up to 6 mm in diameter, unlimited in number	allowed with diameter up to 40 mm, unlimited in number (inclusion of bark is allowed for knots 5 mm wide)
5. Closed cracks	Edge and middle ones are allowed	
6. Open cracks, open joints on spliced veneer	allowed up to 600 mm in length and 2 mm in width not more than 2 pcs./m of the panel width + allowed up to 600 mm in length and 5 mm in width if repaired by putty	allowed up to 800 mm in length and up to 10 mm in width, unlimited in number
7. Irregularities in the wood structure (angle grain, curly grain, interlocked grain, buds)	allowed	
10. Wood structure defects (light and dark inbarks)	light inbark is allowed, dark inbark is allowed with the size limits for intergrown knots	
11. Wood structure defects (open inbarks)	allowed within the limits for loose knots	
10. Sound discoloration (false core)	allowed	
11. Sound discoloration (spotting, veins, vein marks, group veins)	allowed	
12. Chemical coloring; fungi sap stains (blue, colored sap stains), discoloration during the wood storage	allowed	
13. Biological damage (wormholes)	allowed within the limits for loose knots	
14. Discoloration with partial wood disintegration	not allowed	
15. Patching of knots and holes with wood inserts	allowed with an opening of 1 mm on one side or 0.5 mm on two sides	allowed

Appendix A, continued

Wood and manufacturing defects	CP (III) grade	C (IV) grade
16. Double insert	allowed	
17. Crack repair Note: Crack repair with putty or inserts - as agreed with the client	cracks over 5 mm in width must be repaired with glued veneer inserts	allowed
18. Pad rolls (pad marks)	allowed up to 600 mm in length and up to 10 mm in width, max. 5 pcs./panel	allowed
19. Overlap	allowed up to 300 mm in length and 2 mm in width, max. 2 pcs./m of the panel width	allowed
20. Manufacturing stains (traces of beams, streaks)	allowed	
21. Glue penetration	allowed up to max 75% of the panel surface	allowed
22. Mechanical damages, pricks, cuts	allowed within the limits for loose knots	
23. Scratches, scars, bumps, dents, scallops	allowed up to 0.5 mm high (deep), up to 120 mm in length, and up to 10 mm in width	allowed
24. Warping	allowed with a deflection of not more than 15 mm per 1 m of the panel's diagonal length	
25. Presence of an adhesive tape	allowed	
26. Bubbles, delamination, resin pockets	not allowed	
27. Non-sanded spots (non-uniform sanding)	allowed up to max 5% of the panel surface	allowed up to max 50% of the panel surface
28. Sanding through the outer layers	allowed up to max 1 % of the panel surface	allowed
29. Metal inclusions	non-ferrous brackets are allowed	
30. Edge defects due to sanding, sawing, lack of veneer	allowed up to 5 mm in width along the edge	allowed up to 10 mm in width
31. Rough peeling	allowed up to max 15% of the panel surface	allowed
32. Waviness (for sanded plywood), hairiness, wrinkles	allowed	
33. Surface roughness	roughness $_{Rm}$ not more than 200 mcm (according to GOST 7016) is allowed	
34. Pocket (without bark)	allowed	
35. Glued-in veneer pieces	allowed up to 150 mm in length and up to 30 mm in width, 1 pc./panel	
36. Paint and oil stains	allowed	
37. Non-uniform color of plywood surface, oil stains	allowed	

Note: No wood and machining defects not specified in Appendix A are permitted.

Appendix A (Amended version, Ed. No. 1)

APPENDIX B
(mandatory)

Terms and definitions of machining defects of outer plies of SVEZA OIL plywood

The terms and definitions of machining defects of outer plies of SVEZA OIL plywood are specified in Table B.1.

T a b l e B.1

Description of machining defects	Definition
Glued in pieces of veneer	Pieces of veneer glued (pressed) in plywood surface
Coarse peeling	Plywood surface has closely located shallow depressions resulting from local wood removal during peeling
Pocket	Cavity inside wood or between growth rings that is filled with gums
Oil and paint runs	Paint or oil splashes on the plywood sheet surface
Non-uniform colour of the plywood surface, oil application irregularities	Areas on the plywood surface of a non-uniform colour associated with the oil application method

Bibliography

[1] DIN EN ISO 12460-3	Wood-based panels – Determination of formaldehyde release – Part 3. Gas analysis method
[2] EN 326-1-1994	Wood-based panels – Sampling, cutting and inspection – Part 1: Sampling and cutting of test pieces and expression of test results
[3] EN 322:1993	Wood-based panels – Determination of moisture content
[4] EN 323:1993	Wood-based panels – Determination of density
[5] EN 314-1:2004	Plywood – Bonding quality – Part 1: Test methods
[6] EN 310:1993	Wood-based panels – Determination of modulus of elasticity in bending and of bending strength
[7] GN (hygienic standards) 2.1.6.3492-17	Maximum allowable concentrations (MAC) of pollutants in the atmospheric air of urban and rural settlements
[8] GN (hygienic standards) 2.1.6.2309-07	Safe reference levels of impact (SRLI) of pollutants in the atmospheric air of populated areas. Hygienic standards
[9] GN (hygienic standards) 2.1.6.2328-08	Supplement to GN 2.1.6.2309-07 Safe reference levels of impact (SRLI) of pollutants in the atmospheric air of populated areas. Hygienic standards
[10]	Uniform sanitary, epidemiological and hygienic requirements to the goods subject to sanitary and epidemiological supervision (control) approved by Resolution of the Customs Union Commission No. 299 dated May 28, 2010
[11] DIN EN 13986 (German edition of EN 13986-2004+A1-2015)	Wood-based panels for use in construction Characteristics, evaluation of conformity and marking

[11] (Introduced additionally, Ed. No. 2)

UDC (Universal Decimal Classification) 674-415:006.354 ICS (International Classification for Standards) 79.060.10 OKPD (Russian Classification of Products by Economic Activities) 2 16.21.12.119

Keywords: company standard, SVEZA OIL hardwood plywood, sizes, technical requirements, packaging, marking, inspection methods, transportation, storage, warranty.

Standard developer company
SVEZA-Les LLC