

**COMPANY STANDARD****SVEZA TOY BIRCH PLYWOOD  
Technical specifications****STO 52654419-005-2020**

Saint Petersburg  
2020

## **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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**ФАНЕРА SVEZA TOY БЕРЕЗОВАЯ**  
**Технические условия****SVEZA TOY BIRCH PLYWOOD**  
**Technical requirements**

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**Effective date 8 December, 2020****1 SCOPE**

This corporate standard (hereinafter referred to as the Standard) applies to SVEZA TOY birch plywood (hereinafter referred to as SVEZA TOY plywood) that is used as an essential material in manufacture of souvenirs, toys and children's furniture, both as finished products and as their components.

SVEZA TOY plywood may be used as the main material in the manufacture of parts and components of furniture, including children's furniture.

**2 NORMATIVE REFERENCES**

This Standard includes normative references to the following standards:

- GOST 12.4.011 Occupational safety standards system. Means of protection. General requirements and classification
- GOST 427-75 Measuring metal rules. Specifications
- GOST 2140 Visible wood defects. Classification, terms and definitions, measurement methods
- GOST 3749 Checking 90° squares. Specifications
- GOST 6507-90 Micrometers. Technical specifications
- GOST 7016 Products of wood and wood materials. Roughness parameters
- GOST 7502 Measuring metal tapes. Technical specifications
- GOST 8925 Flat clearance gauges for machine retaining devices. Design
- GOST 9620 Laminated glued wood. Sampling and general requirements in testing
- GOST 9621 Laminated glued wood. Methods for determination of physical properties
- GOST 9624 Laminated glued wood. Method for determination of shear strength
- GOST 9625 Laminated glued wood. Method for determination of ultimate and modulus of elasticity in static bending

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

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

GOST 18321 Statistical quality control. Item random sampling methods

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

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

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

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

Note: when using this Standard it is advisable to check the validity of the reference standards in the “National Standards” information index published annually.

### 3 CLASSIFICATION AND SIZES

3.1 In terms of water resistance of adhesive bonding and conditions of use, SVEZA TOY plywood is divided into the following categories:

- INT / ΦK: waterproof plywood bonded with carbamide-formaldehyde glues, for interior use;
- EXT: plywood characterised by an increased adhesive bonding resistance to water, bonded with phenol-formaldehyde glues and intended for interior and exterior use.

Note: SVEZA TOY plywood of INT / ΦK category belongs to INT formaldehyde emission group, SVEZA TOY plywood of EXT / ΦCΦ category belongs to EXT formaldehyde emission group.

3.2 Based on its surface appearance, SVEZA TOY plywood is divided into the following grades: B, BB, CP, C (when Latin letters are used) and I, II, III, IV (when Roman numerals are used).

A grade designation includes both, Latin letters and Roman numerals. T is added before the grade designation.

3.3 In terms of surface machining SVEZA TOY plywood is S2S, two sides sanded plywood.

#### 3.4 Sizes

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

Table 1

In millimeters	
Plywood sheet length (width)	Maximum deviation
1,220, 1,250	±3.0
1,500, 1,525	±4.0
2,440, 2,500	±4.0

**Notes:**

1. SVEZA TOY plywood may be produced in other sizes and with other maximum deviations as agreed upon between the manufacturer and the customer.
2. SVEZA FANCY plywood sheet length is determined parallel to grain direction of outer plies

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

**Table 2**

Nominal plywood thickness, mm	Minimum thickness, mm	Maximum thickness, mm	Maximum deviation, mm	Thickness variation in one sheet, not more than, mm	Number of plies, not less than
3.0	2.8	3.2	±0.2	0.2	3
4.0	3.8	4.2			3
5.0	4.8	5.2			4
6.0	5.7	6.3			5
6.5	6.2	6.8	±0.3		5
8.0	7.7	8.3			7
9.0	8.7	9.3			7
10.0	9.7	10.3			7
12.0	11.7	12.3			9
12.7	12.4	13.0			9
14.9	14.6	15.2			11
15.0	14.7	15.3	11		
18.0	17.5	18.5	±0.5		13
21.0	20.5	21.5			15
24.0	23.5	24.5			17
27.0	26.5	27.5			19
30.0	29.5	30.5			21

Note: SVEZA TOY 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 TOY plywood sheets should be cut at a right angle.

The out of square length should not exceed 2 mm per 1 m of the long sheet side 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 TOY plywood designation should include the following information:

- name of the product with the wood species stated;
- 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 TOY birch plywood, EXT category, BB/BB (II/II) grades combination of the outer plies veneer, E1 emission class, two sides sanded, 2,440 mm long, 1,220 mm wide and 12 mm thick:

*Фанера SVEZA TOY березовая / SVEZA TOY birch plywood,  
EXT / ФСФ, Т BB/BB (II/II), E1, S2S / Ш2, 2,440 x 1,220 x 12  
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Example of designation for SVEZA TOY birch plywood, INT category, BB/BB (II/II) grades combination of the outer plies veneer, E1 emission class, two sides sanded, 2,440 mm long, 1,220 mm wide and 12 mm thick:

*Фанера SVEZA TOY березовая / SVEZA TOY birch plywood,  
INT / ФК, Т BB/BB (II/II), E1, S2S / Ш2, 2,440 x 1,220 x 12  
STO 52654419-005-2020*

## 4 TECHNICAL REQUIREMENTS

### 4.1 Characteristics

4.1.1 Birch veneer of different thickness is used to produce outer and inner plies of SVEZA TOY plywood.

The minimum thickness of outer plies after sanding should be at least half of their initial thickness.

4.1.2 No wood and machining defects that exceed the limits specified in Appendix A are permitted in outer plies of SVEZA TOY plywood. The terms and definitions of wood and machining defects are according to GOST 30427 and Appendix B.

4.1.3 Depending on the outer plies quality, SVEZA TOY plywood is produced in any combinations of grades listed in par. 3.2 of this Standard.

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

Table 3

Emission class	Formaldehyde content	Formaldehyde release		
	Perforator method, mg/100 g of oven-dry weight of plywood	Small-scale chamber method, mg/m <sup>3</sup> of air	Small-scale chamber method, ASTM E1333, ppm	Gas analysis method, mg/m <sup>2</sup> *h
E 0.5	Up to and including 4.0	Up to and including 0.01	Up to 0.04*	Up to and including 1.3
E1	Over 4.0 up to and including 8.0	Over 0.01 up to and including 0.124	Up to 0.04*	Over 1.3 and up to and including 1.5 or less than 3.5 within 3 days after production
Note: * - to be confirmed by providing a CARB Executive Order				

4.3 The physical and mechanical properties of SVEZA TOY plywood are given in Table 4.

Table 4

Item	Thickness, mm	Value of physical and mechanical properties for categories	
		INT / ΦK	EXT / ΦCΦ
1 Moisture content, % not more than	3.0 – 30.0	10	
2 Ultimate shear strength along bondline, MPa, not less than	3.0 – 30.0	1.0	
Item	Thickness, mm	Value of physical and mechanical properties for categories	
		INT / ΦK	EXT / ΦCΦ
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	9.0 – 30.0	45	60
		30	30



4 Modulus of elasticity in static bending: - parallel to grain, MPa, not less than - perpendicular to grain, MPa, not less than	9.0 – 30.0	5,000 3,000	6,000 3,000
5 Ultimate tensile strength perpendicular to board plane, MPa, not less than	3.0 – 30.0	1.2	
<p><b>Notes:</b></p> <p>1. SVEZA TOY plywood shipped from the manufacturer's warehouse should have the moisture content values specified above.</p> <p>2. INT / ΦK category SVEZA TOY plywood is tested for shear strength along bondline after soaking the test pieces in water at <math>(20 \pm 3) ^\circ\text{C}</math> for 24 hours.</p> <p>3. EXT / ΦCΦ birch plywood is prepared for testing using one of the following methods:</p> <p>3.1 boiling in water for 1 hour;</p> <p>3.2 boiling in water for 6 hours;</p> <p>3.3 boiling in water for 4 hours, drying in a ventilated cabinet at <math>(60 \pm 3) ^\circ\text{C}</math> for (16-20) hours, second boiling in water for 4 hours, cooling in water at <math>(20 \pm 3) ^\circ\text{C}</math> for 1 hour;</p> <p>3.4 boiling for <math>(72 \pm 1)</math> hours, cooling in water at <math>(20 \pm 3) ^\circ\text{C}</math> for 1 hour: quarterly;</p> <p>3.5 soaking in water at <math>(20 \pm 3) ^\circ\text{C}</math> for 24 hours: quarterly.</p> <p>Methods 3.3, 3.4, 3.5 are used to prepare EXT / ΦCΦ category birch plywood for testing when new resins are tested.</p> <p>The preparation method for the test pieces is selected as agreed upon between the manufacturer and the customer.</p> <p>4. The test for determining the shear strength along bondline is performed in different bondlines as agreed upon between the manufacturer and the customer. The wood failure percentage is not determined.</p>			

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

4.5 The marking is made using an indelible ink and applied on the end of each SVEZA TOY plywood sheet in the form of a stamp or text without margins. The marking should contain the following information:

- a brief designation of the product according to the declaration of performance (in accordance with DIN EN 13986 [13]);

- grade of SVEZA TOY plywood;
- manufacturer (code or name);
- thickness and/or sorter number.

No stamp is applied to the face.

The stamp on the edge is applied in the corner of the long or short end.

It is permitted to apply one stamp per (1-3) sheets of SVEZA TOY plywood of a thickness of 3 to 9 mm.

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

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

#### 4.6 Stacking of SVEZA TOY plywood

SVEZA TOY plywood sheets should be stacked in packs of 400, 600 and 900 mm high sorted by grade, size and thickness.

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

SVEZA TOY plywood sheets in a pack should be stacked so that their grain directions coincide.

SVEZA TOY plywood sheets in a pack should be stacked so that the higher grades face upward.

#### 4.7 Packaging and marking of ready for shipment SVEZA TOY plywood packs

4.7.1 Packs of SVEZA TOY 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 packaging for SVEZA TOY plywood.

4.7.2 The marking to packaged packs of SVEZA TOY 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 TOY Birch plywood;
- sizes and thickness of SVEZA TOY plywood and thickness tolerances (if required);
- SVEZA TOY plywood grade according to Appendix C;
- SVEZA TOY plywood category (INT / ФК) or (EXT);
- surface machining of SVEZA TOY plywood;
- sheets per pack;
- shift;
- SVEZA TOY plywood date of production;
- 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 TOY plywood is produced;
- manufacturer name and address;
- standard compliance mark;
- certification markings;
- 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.

## 5 ACCEPTANCE RULES

5.1 SVEZA TOY plywood is accepted in batches.

A batch is a certain number of SVEZA TOY plywood sheets of the same grade and size.

One document should be issued for a batch, which contains the following information:

- trademark;
- manufacturer name and address;
- designation of SVEZA TOY plywood;
- batch size;
- the regulatory technical document based on which SVEZA TOY plywood is produced.

5.2 SVEZA TOY plywood sheets quality and sizes are checked by selective sampling. The selective check involves random sampling of SVEZA TOY plywood sheets according to GOST 18321 in the number specified in Table 5.

Table 5

In sheets

Batch size	Controlled value under paragraphs			
	3.4.1; 3.4.2; 3.4.3; 3.4.4		4.1.2	
	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, 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 TOY plywood at least once a month.

5.4 The control of the formaldehyde release involves selection of one sheet of SVEZA TOY plywood from any size sample.

The formaldehyde release is controlled at least once every 7 days by a gas analysis method for each formaldehyde emission group.

The formaldehyde release is controlled using the small-scale chamber method according to ASTM D6007 in an independent accredited laboratory on an annual basis in accordance with the CARB ATCM and EPA TSCA Title VI requirements. The in-process monitoring of the formaldehyde emission for every plywood batch is performed through a correlation comparison of the values obtained in a third-party la-

boratory using the small-scale chamber method with the respective value obtained by the gas analysis method in the testing laboratories that granted approval for the SVEZA TOY plywood batch in question.

5.5 A batch is considered compliant with the requirements of this Standard and is accepted if in the samples:

- the number of SVEZA TOY plywood sheets non-compliant with the requirements in terms of sizes, out of square length, straightness, wood and machining defects is less than or equal to the acceptance number specified in Table 5;

- no sheets of SVEZA TOY plywood have any blisters, delamination or bark pockets;

- the values of physical and mechanical properties correspond to the values specified in Table 4;

- the formaldehyde release values correspond to the standard values specified in Table 3.

## 6 INSPECTION METHODS

6.1 Sampling is according to GOST 9620, GOST 27678, GOST 32155, GOST 30255, [1] - [2], [6].

6.2 The SVEZA TOY 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 The thickness of SVEZA TOY plywood 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 TOY plywood is defined as difference between the maximum and the minimum thickness values after four measurements.

6.4 Out of square length of SVEZA TOY plywood sheet

6.4.1 The out-of-straightness of SVEZA OVERLAY 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 TOY 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 Warp

6.6.1 The warp of SVEZA TOY birch plywood 1,500 mm and 1,525 mm long with B and BB grade combinations of the outer plies veneer is determined on a horizontal table whose dimensions are not smaller than the length and width of the plywood sheet.

First, W or P warp shape of the sheet is visually evaluated after placing the sheet on the horizontal table.

6.6.1.1 SVEZA TOY birch plywood 1,500 mm and 1,525 mm long with B and BB grade combinations of the outer plies veneer and W warp shape should be pressed tightly to and fixed on the horizontal table at points 1, 2 and 3. The measurement should be taken at point 4 using a measuring metal ruler according to GOST 427 or a measuring metal tape according to GOST 7502 as shown in Figure 1.

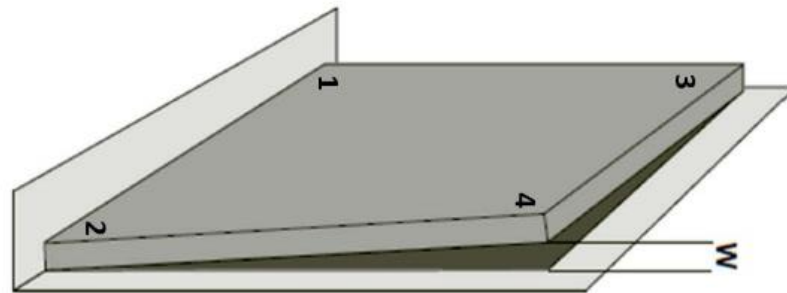


Fig. 1

6.6.1.2 SVEZA TOY birch plywood 1500 mm and 1525 mm long with B and BB grade combinations of the outer plies veneer and P warp shape should be fixed on the table at points 1 and 2. The measurement should be taken at point 3 using a measuring metal ruler according to GOST 427 or a measuring metal tape according to GOST 7502 as shown in Figure 2.



Fig. 2

6.6.1.3 The warp tolerances by shape for SVEZA TOY birch plywood 1,500 mm and 1,525 mm long with B and BB grade combinations of the outer plies veneer are specified in Table 6.

Table 6

Warp shape	Nominal plywood thickness, mm	Distance from the reference plane to the sheet surface, not more than, mm
		For a length of 1,500 mm; 1,525 mm
P / W	$\leq 6.5$	not considered
P	6.5 to 15	12
P	$> 15$	7.5
W	$> 6.5$	15

6.6.2 For the SVEZA TOY plywood with the characteristics other than specified in par. 6.6.1 – according to GOST 30427.

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

6.8 The ultimate shear strength along bondline is according to GOST 9624, [4].

6.9 The ultimate strength and modulus of elasticity in static bending are according to GOST 9625, [5].

6.10 The formaldehyde content is according to GOST 27678 (the said method is used as the reference method), formaldehyde release in the environment is according to GOST 30255, GOST 32155, and [1].

6.11 The ultimate tensile strength perpendicular to board plane is according to [6].

6.12 The surface roughness is according to GOST 15612.

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

## 7 TRANSPORTATION AND STORAGE

7.1 Birch 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 DRAWER plywood moisture content that may result in changes of geometric, physical, qualitative characteristics of the plywood and emission class.

FK birch plywood of 1,500 mm and 1,525 mm length with combination of external layers grades: B, BB and warping requirements as specified in item 6.6 should be transported only in a horizontal position and in a special packing preventing warping.

In case of non-compliance with this requirement (vertical transportation in order to increase the amount of plywood to be transported, i.e. putting bundle on edge or without special packing), the manufacturer guarantees warping not more than 15

mm per 1 m of the panels' diagonal length for plywood with the thickness over 6.5 mm. On plywood up to 6.5 mm thick, any degree of warping is acceptable.

#### 7.2 Storage of SVEZA TOY plywood

SVEZA TOY 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%.

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## **8 MANUFACTURER'S WARRANTY**

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

The guaranteed shelf life of SVEZA TOY plywood of INT / ФК category is 3 years, EXT category is 5 years from the day of receipt by the customer.

When SVEZA TOY 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 in the air of residential premises and public buildings when items made of SVEZA TOY plywood are used should not exceed the values specified by the requirements of [8], [9].

9.2 The compliance with the requirements of [10] and [12] to items made with the use of SVEZA TOY plywood is ensured by the manufacturers of those items through application of the appropriate technological solutions and protective coatings.

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

9.4 The personnel engaged in SVEZA TOY 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.

9.5 The personnel engaged in SVEZA TOY plywood production should be provided with personal protective equipment according to the applicable regulations in compliance with GOST 12.4.011.

9.6 Specific activity of Cesium 137 in SVEZA TOY plywood should not exceed the hygiene standards specified by the requirements of [11].

9.7 SVEZA TOY standard plywood does not contain any raw materials, materials and components classified as hazardous waste.

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



APPENDIX A  
(mandatory)

**Limits for wood and machining defects according to GOST 30427 for outer plies of SVEZA TOY plywood**

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

Table 1

WOOD AND MACHINING DEFECTS	B (I)	BB (II)	CP (III)	C (IV)
1. Pin knots	permitted			
2. Sound intergrown knots, light and dark	permitted up to 15 mm in diameter with a check of up to 0.5 mm in the maximum number of 5 per m <sup>2</sup>	permitted up to 25 mm in diameter with a check of up to 1 mm in the maximum number of 10 per m <sup>2</sup>	permitted with a check of up to 1 mm wide	permitted
3. Partially intergrown knots	permitted within the limits specified in par. 4 of this Appendix, up to 6 mm in diameter in the maximum number of 3 per m <sup>2</sup>		permitted within the limits for intergrown knots up to 15 mm in diameter in the maximum number of 10 per m <sup>2</sup>	permitted up to 40 mm in diameter without quantity restrictions
4. Non-adhering knots, falling out knots, knot holes (without bark inclusion)	permitted within the limits for intergrown knots up to 6 mm in diameter in the maximum number of 3 per m <sup>2</sup>	permitted within the limits for intergrown knots up to 6 mm in diameter in the maximum number of 6 per m <sup>2</sup>	permitted up to 6 mm in diameter without quantity restrictions	permitted up to 40 mm in diameter without quantity restrictions (permitted bark inclusion at knots up to 5 mm wide)
5. Small checks	permitted up to 200 mm long in the maximum number of 5 per metre of the	permitted up to 300 mm long in the maximum number of 5 per metre of the	permitted at the edges and in the middle	permitted

WOOD AND MACHINING DEFECTS	B (I)	BB (II)	CP (III)	C (IV)
	sheet width	sheet width		
6. Large checks, open joint of jointed veneer	not permitted	permitted of a length of up to 250 mm, width of up to 2 mm in the maximum number of 3 per metre of the sheet width	permitted of a length of up to 600 mm, width of up to 2 mm in the maximum number of 2 per metre of the sheet width + permitted of a length of up to 600 mm, width of up to 5 mm provided that they are repaired with a filler	permitted of a length of up to 800 mm, width of up to 10 mm, without quantity restrictions
7. Irregularities in wood structure (sloping grain, curly grain, swirl, small knots from dormant buds)	permitted			
8. Defects of wood structure (intergrown inbark, light and dark)	only light inbark is permitted, dark inbark is permitted within the size range and number limits for non-adhering knots	light inbark is permitted, dark inbark is permitted within the size range for non-adhering knots		
9. Defects of wood structure (open inbark)	permitted in the total number within the limits for non-adhering knots			
10. Sound discoloration (false heartwood)	not permitted	permitted up to 25% of the sheet surface	permitted	permitted
11. Sound discoloration (spots, streaks, streak marks)	Permitted light ones not more than 15 % of the sheet surface area	permitted		
12. Sound discoloration (group streaks)	Permitted light ones not more than 15 % of the sheet surface area	permitted		
13. Discoloration due to oxidation; sapwood discoloration	permitted up to 30 % of the sheet surface	permitted		

WOOD AND MACHINING DEFECTS	B (I)	BB (II)	CP (III)	C (IV)
tion caused by wood-staining fungi (blue stain, sapwood color stains), discoloration during storage				
14. Biological defects (wormhole)	permitted in the total number within the limits for non-adhering knots			
15. Discolouration with partial wood damage	not permitted			
16. Repairing of knots and holes with wood plugs before pressing	not permitted	permitted using butterfly-shaped plugs in the maximum number of 8 per m <sup>2</sup> , the wood colour and grain direction should correspond to the wood colour and grain direction of the outer ply	Permitted using butterfly-shaped plugs with a gap of 1 mm on one side or 0.5 mm on both sides	permitted using butterfly-shaped plugs
17. Double plug	not permitted	permitted in the maximum number of 1 per m <sup>2</sup>	permitted	
18. Repairing of large checks with veneer plugs	not permitted			
19. Bulges due to overlapping inner plies (marks indicating plies overlap)	not permitted	permitted of a length of up to 200 mm, width of up to 3 mm in the maximum number of 3 per sheet	permitted of a length of up to 600 mm, width of up to 5 mm in the maximum number of 5 per sheet	permitted
20. Overlap	not permitted	permitted of a length of up to 100 mm, width of up to 2 mm in the maximum number of 1 per metre of the sheet width	permitted of a length of up to 300 mm, width of up to 2 mm in the maximum number of 2 per metre of the sheet width	permitted
21. Marks left by tools and equipment (marks left by battens, stripes)	not permitted	permitted up to 10 % of the sheet surface	permitted	

WOOD AND MACHINING DEFECTS	B (I)	BB (II)	CP (III)	C (IV)
22. Glue penetration	not permitted	permitted up to 2 % of the sheet surface	permitted up to 5 % of the sheet surface	permitted
23. Marks left by tools and equipment, pinholes, kerfs	permitted in the total number within the limits for non-adhering knots			
24. Scratches, ridges, bumps, dents, crests	not permitted		permitted up to 0.5 mm high (deep), up to 120 mm long, up to 10 mm wide	permitted
25. Warp	in accordance with par. 6.6.1		not considered in plywood under 6.5 mm thick, permitted maximum deflection of 15 mm per 1 m of the length of the diagonal of a plywood sheet over 6.5 mm thick	
26. Glue thread	not permitted		permitted	
27. Blisters, delamination (incl. in bending), bark pocket	not permitted			
28. Sander skips (non-uniform sanding)	not permitted			permitted up to 50 % of the sheet surface
29. Sanding through	not permitted		permitted up to 1% of the sheet surface	permitted
30. Metal inclusions	not permitted		permitted non-ferrous metal staples	
31. Edge defects after trimming, missing veneer	not permitted	permitted of a width of up to 2 mm		permitted of a width of up to 10 mm
32. Coarse peeling	not permitted	permitted up to 5 % of the sheet surface	permitted up to 15 % of the sheet surface	permitted
33. Waviness (for sanded plywood), fuzzy grain, ripple	not permitted		permitted	
34. Surface roughness	roughness $R_m$ is according to GOST 7016, $\mu\text{m}$ , not more than 100			
35. Pocket (without bark	not permitted	permitted in the total num-	permitted	

WOOD AND MACHINING DEFECTS	B (I)	BB (II)	CP (III)	C (IV)
inclusion)		ber within the limits specified in par. 12 of this Appendix		
36. Glued in pieces of veneer	not permitted		permitted of a length of up to 150 mm, width of up to 30 mm in the maximum number of 1 per sheet	permitted

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

**APPENDIX B  
(mandatory)**

**Terms and definitions of machining defects of outer plies of SVEZA TOY plywood**

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

Table 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

APPENDIX C  
(mandatory)

**Designation of SVEZA TOY plywood grades**

The designation of SVEZA OVERLAY plywood grades is given in Table C.1

Table C.1

Latin letters	Roman numerals	Text on the label in the "Grade" field
B/B	I/I	T B/B (I/I)
B/BB	I/II	T B/BB (I/II)
B/CP	I/III	T B/CP (I/III)
B/C	I/IV	T B/C (I/IV)
BB/BB	II/II	T BB/BB (II/II)
BB/CP	II/III	T BB/CP (II/III)
BB/C	II/IV	T BB/C (II/IV)
CP/CP	III/III	T CP/CP (III/III)
CP/C	III/IV	T CP/C (III/IV)
C/C	IV/IV	T C/C (IV/IV)

## 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 314-1:2004 Plywood – Bonding quality – Part 1: Test methods
- [5] EN 310:1993 Wood-based panels – Determination of modulus of elasticity in bending and of bending strength
- [6] DIN EN 319:1993 Particleboards and fibreboards. Determination of tensile strength perpendicular to the plane of the board
- [7] ASTM D6007-02 Standard test method for determining formaldehyde concentration in air from wood products using a small-scale chamber
- [8] GN (hygienic standards) 2.1.6.3492-17 Maximum allowable concentrations (MAC) of pollutants in the atmospheric air of urban and rural settlements
- [9] 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
- [10] TR CU 025/2012 Technical Regulations of the Customs Union  
On Safety of Furniture Products
- [11] 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
- [12] TR CU 008/2011 On safety of toys
- [13] DIN EN 13986 Wood-based panels for use in construction.  
(German version of EN 13986-2004+A1-2015) Characteristics, evaluation of conformity and marking



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 TOY birch plywood, sizes, technical requirements, packaging, marking, inspection methods, transportation, storage, warranty.

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Standard developer company  
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