



CORPORATE STANDARD*

**SVEZA TOY BIRCH PLYWOOD
Technical Specifications**

STO 52654419-005-2018

Saint Petersburg
2018

* In case of discrepancies, the Russian version of the organization's standard is to be considered as priority. / В случае возникновения разночтений приоритетной является версия стандарта организации на русском языке

Preface

Development purposes and objectives, as well as the use of corporate standards in the Russian Federation, are stated by Federal Law 184-FZ *On Technical Regulation* of December 27, 2002 and Federal Law of June 29, 2015.

No. 162-FZ *On Standardization in the Russian Federation*.

Development and execution rules are stated by GOST R 1.0-2012 *Standardization in the Russian Federation. General provisions* and GOST R 1.4-2004 *Standardization in the Russian Federation. Corporate Standards. General Provisions*, subject to GOST R 1.5-2012, *Standardization In the Russian Federation. National standards. Regulations on arrangement, representation, execution, and designation*.

Information on Standard

1 DEVELOPED AND INTRODUCED by SVEZA Forest, a limited liability company

2 APPROVED AND ENACTED by order of the General Director of OOO SVEZA Forest dated _____. No. _____

3 FIRST RELEASE

4 APPROVED by OOO SVEZA Forest Sales and Marketing Director R.A. Muzyka _____, _____. 20 ____

5 THE EXPERT CONCLUSION, dated 09.04.2018, HAS BEEN RECEIVED from E.Yu. Tretyakova, Expert in the confirmation of the conformity of woodworking industry products, Head of the Fantest NP Certification Body, and member of Technical Committee on Standardization TK 121.

This standard may only be used for work with the written consent of OOO SVEZA Forest.

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CORPORATE STANDARD

SVEZA TOY BIRCH PLYWOOD Technical Specifications

BIRCH PLYWOOD SVEZA TOY Technical requirements

Effective since _____, 20__

1 SCOPE

This standard applies to SVEZA TOY birch plywood (hereinafter referred as SVEZA TOY plywood), used as the primary material in the manufacture of souvenirs and toys, both the finished products and their components.
Use of SVEZA TOY plywood as the primary material in the manufacture of furniture parts and components is permitted.

2 REGULATORY REFERENCES

This standard hereby includes regulatory reference to the following standards:
GOST 12.4.011-89 Occupational safety standards system. Worker means of protection. General requirements and classification
GOST 427-75 Metal rulers. Technical Specifications
GOST 2140-81 Visible defects of wood. Classification, terms and definitions, methods of measurement
GOST 3749-77 90° L-squares. Specifications
GOST 6507-90 Micrometers. Specifications
GOST 7016-2013 Products of wood and wooden materials. Surface roughness parameters
GOST 7502-98 Metal measuring tapes. Specifications
GOST 8925-68 Feeler gauges for machine tool accessories. Design
GOST 9620-94 Glued laminated timber. Sampling and general requirements for testing
GOST 9621-72 Glued laminated timber. Methods for determination of physical properties
GOST 9624-2009 Glued laminated timber. Method for determination of shear strength
GOST 9625-2013 Glued laminated timber. Method of determining of static bending strength 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 of wood and wood materials. Methods for determination of surface roughness parameters

GOST 18321-73 Statistical quality control. Random sampling methods for custom production

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

GOST 30255-2014 Furniture, timber and polymer materials. Method for determination of formaldehyde and other volatile chemicals in the air of climate chambers

GOST 30427-96 General-purpose plywood. General rules for classification by appearance

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

Note: While using this standard it is advisable to check the validity of the standards referenced against the National Standards reference index.

3 CLASSIFICATION AND DIMENSIONS

3.1 SVEZA TOY plywood is divided into grades according to the degree of water resistance of the WBP glue joints and the conditions of use:

— INT/FK is water-resistant plywood, glued using carbamide-formaldehyde adhesives and intended for indoor use.

— EXT/FSF is plywood with enhanced water resistance of the WBP glue joint, glued using phenol-formaldehyde adhesives and intended for indoor and outdoor use.

Note. SVEZA TOY plywood of INT/FK type qualifies as a INT formaldehyde emission group and SVEZA TOY plywood of the EXT/FSF type qualifies as the EXT formaldehyde emission group.

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

The grade designator is indicated by both Latin letters and Roman numerals. T letter is added before the grade designation.

3.3 As for surface mechanical processing, SVEZA TOY plywood is available sanded on both sides — S2S / III2.

3.4 Dimensions

3.4.1 The length and width of SVEZA TOY plywood sheets must be as shown in Table 1 below.

Table 1

In millimeters

Length (width) of plywood sheet	Maximum deviation
1220; 1250	±3.0
1500, 1525	±4.0
2440; 2500	±4.0

Notes:

1. SVEZA TOY plywood may be produced with other dimensions and maximum deviations by agreement between the manufacturer and the customer
2. The SVEZA TOY plywood sheet length is measured along the grain of the face plies.

3.4.2 Thickness and number of plies of SVEZA TOY plywood should be as shown in Table 2 below.

Table 2

Nominal Thickness Of plywood (mm)	Minimum thickness (mm)	Maximal thickness (mm)	Tolerance limit (mm)	Thickness variation in one sheet, maximum (mm)	Number of plies, minimum
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	±0.3		5
6.5	6.2	6.8			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 is permitted to be produced with other thicknesses, number of layers, and maximum deviations by agreement between the manufacturer and the customer

3.4.3 SVEZA TOY plywood sheets must be cut square.

Out-of-squareness must not exceed 2 mm per 1 m of the sheet edge length, using the quality control method as per clause 6.4.1.

Difference in the diagonal lengths must not exceed 2 mm per 1 m of the sheet edge length, when checked as per section 6.4.2.

3.4.4 Out-of-straightness for the edges must not exceed 2 mm per 1 m of the sheet length.

3.5 SVEZA TOY plywood marking must include the following information:

- product designation with wood species specified;
- grade;
- combination of face ply grades (using Latin letters and Roman numerals);
- emission class;
- surface treatment type;
- dimensions;
- this Standard number.

Example of marking for SVEZA TOY birch plywood INT / FK with a combination of face ply grades BB/CP (II/III), emission class E1, both sides sanded, 1,525 mm length, 1,525 mm width, 10 mm thickness:

*Фанера SVEZA TOY березовая / Birch Plywood SVEZA TOY,
INT / FK, T BB/CP (II/III), E1, S2S / III2, 1525 x 1525 x 10
STO 52654419-005-2018*

Example of marking for SVEZA TOY birch plywood EXT / FSF with a combination of face ply grades BB/BB (II/II), emission class E1, both sides sanded, 2,440 mm length, 1,220 mm width, 12 mm thickness:

*Фанера SVEZA TOY березовая/SVEZA TOY Birch Plywood,
EXT/FSF, T BB/BB (I/II), E1, S2S/III2, 2,440 x 1,220 x 12
STO 52654419-005-2018.*

4 TECHNICAL REQUIREMENTS

4.1 Characteristics

4.1.1 Birch veneer of various thickness is used for core and face plies of SVEZA TOY plywood.

Minimum thickness of face plies after sanding should be not less than half the initial thickness of the face ply.

4.1.2 In outer veneers of the SVEZA TOY plywood, wood flaws and processing defects that exceed the limits specified in Appendix A are not allowed. Terms and definitions of wood flaws and processing defects are as per GOST 30427 and Appendix B.

4.1.3 SVEZA TOY plywood is available in any combination of the grades mentioned in clause 3.2 herein, depending on the quality of the outer layers.

4.2 Formaldehyde content in the plywood and formaldehyde emission from SVEZA TOY plywood into the room air must comply with the value specified in Table 3.

Table 3

Emission class	Formaldehyde content	Formaldehyde release		
		Chamber method (mg/m ³ of air)	Chamber method ASTM D6007 (ppm)	Gas analysis method, (mg/m ² ·h)
E1	Perforatory method / 100 grams of absolutely dry weight of plywood, mg From over 4.0 up to 8.0 inclusive	From over 0.01 up to 0.124 inclusive	Up to 0.04*	Up to 1.3 inclusive, or less than 1.5 during 3 days after manufacturing

Note:
* - shall be certified by provision of Executive order CARB

4.3 Physical and mechanical performance of SVEZA TOY plywood is specified in Table 4.

Table 4

Parameter	Thickness, (mm)	Physical and Mechanical Parameter Values, for the Grades	
		INT / FK	EXT / FSF
1. Moisture, max (%)	3.0 – 30.0	10	
2. Shear strength needed to shear through an adhesive layer, min (MPa)	3.0 – 30.0	1.0	
3. Static bending strength: — along the grain of the face plies, min (MPa) — across the grain of the face plies, min (MPa)	9.0 – 30.0	45 30	60 30
4 Modulus of elasticity in static bending: — along the grain, min (MPa) — across the grain, min (MPa)	9.0 – 30.0	5,000 3,000	6,000 3,000
5. Tensile strength perpendicular to the bonding plane, min (MPa)	3.0 – 30.0	1.2	

Notes:
1. Indicated moisture limits must be observed when shipping SVEZA TOY plywood from the manufacturer's warehouse.
2. INT/FK grade SVEZA TOY birch plywood adhesive layer shear tests shall be performed after

soaking the samples in water at 20 ± 3 °C for 24 hours.

3. Preparation EXT/FSF grade plywood for testing shall be performed using one of four following methods:

3.1 boil in water for 1 hour;

3.2 boil in water for 6 hours;

3.3 boil in water for 4 hours, dry in a ventilated cabinet at a temperature of 60 ± 3 °C for 16–20 hours, repeat soaking in boiling water for 4 hours and cool in 20 ± 3 °C water for 1 hour;

3.4 boil in water for 72 ± 1 hours, cool in 20 ± 3 °C water for 1 hour, and repeat once every 3 months;

3.5 oak in 20 ± 3 °C water for 24 hours, and repeat once every 3 months.

Methods 3.3, 3.4, and 3.5 are used to prepare EXT/FSF grade film-faced birch plywood for new resins testing.

The sample preparation method shall be selected according to the agreement between the manufacturer and the customer.

4. The adhesive layer shear test must be performed in various adhesive layers according to the agreement between the manufacturer and customer. The percentage of wood destruction is determined visually.

4.4 SVEZA TOY plywood stock is accounted for in cubic meters. One sheet's volume is calculated without regard to rounding. The volume of assembled SVEZA TOY plywood stacks and batches is calculated with accuracy of 0.001 m^3 . The area of a single SVEZA TOY plywood sheet is calculated with accuracy of 0.01 m^2 , and the area of the sheets in a batch with accuracy of 0.5 m^2 .

4.5 Marking shall be applied using indelible black or green ink on the edge of each SVEZA TOY plywood sheet as a stamp or text without margins. Marking must include the following information:

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

Flat face should not be stamped.

Edge stamp is placed in the corner of the transverse or longitudinal edge.

For the SVEZA TOY plywood with a thickness of 3-9 mm the stamp may be placed once for each (1-3) sheet.

Allowable by agreement between the manufacturer and the customer:

- to not mark SVEZA TOY plywood sheets;
- to not include additional information in the mandatory marking.

4.6 Packing of SVEZA TOY plywood

The SVEZA TOY plywood must be packed into 400, 600 and 900 mm high stacks according to grade, size, and thickness.

By agreement between the manufacturer and the customer, the SVEZA TOY plywood may be packed in stacks of a height other than that specified.

The SVEZA TOY plywood in the stack must be placed with the grain running in the same direction.

The SVEZA TOY plywood in the stack should be placed so that the higher grade should face the top.

4.7 Packing and labeling of ready stacks of SVEZA TOY plywood

4.7.1 SVEZA TOY plywood stack packaging must ensure the integrity of the stacks and preserve them during transportation.

Primary packaging methods and types are regulated by OOO SVEZA-Les. Other types and methods of packaging plywood may be used upon agreement between the manufacturer and the customer.

4.7.2 Packaged SVEZA TOY plywood stacks will be marked with labels. The label text will be in Russian and/or English and placed on two parallel or perpendicular side coverings. Both labels will bear the same information:

- Trademark
- Product designation, i.e. Birch Plywood SVEZA TOY/ΦΑΗΕΡΑ SVEZA TOY березовая
- Dimensions, SVEZA TOY plywood thickness and thickness tolerance value (if required)
- SVEZA TOY plywood grade as per Appendix B
- SVEZA TOY plywood designation (INT/FK) or (EXT/FSF)
- Type of machining used on the SVEZA TOY plywood surface
- Number of sheets in a stack
- Work shift
- SVEZA TOY plywood production date
- Emissions class
- Order number per Special Terms and Conditions (upon agreement with the customer)
- Reference document governing the manufacture of SVEZA TOY plywood
- Manufacturer name and address
- Quality control marks
- Certification marks
- Handling instructions: “Keep Dry” and “Use No Hooks”
- Barcode, if a data collection terminal (scanner) is available

For more streamlined storage operations, additional marking may be applied using labels or stencils.

5 ACCEPTANCE REQUIREMENTS

5.1 SVEZA TOY plywood shall be accepted in lots.

Lot means a certain number of SVEZA TOY plywood sheets of the same grade and size.

For each lot, a single supporting document must be issued, containing the following information:

- trademark;
- manufacturer name and address;
- plywood mark;
- lot size;
- name of the process standard to which the plywood should comply.
- reference document governing the manufacture of SVEZA TOY plywood

5.2 The quality and dimensions of SVEZA TOY plywood sheets shall be checked by means of selective sampling and testing. In sampling inspection, sheets of SVEZA TOY plywood are selected by means of “random” sampling as per GOST 18321 in the quantity stated in Table 5.

Table 5

In sheets

Lot size	Checked parameter as per sections herein			
	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
501-1200	13	1	20	2
1201-3200	13	1	32	3
3201-10,000	20	2	32	3

5.3 Moisture, shear strength through the adhesive layer, strength in static bending across and along the outer veneers, modulus of elasticity for static bending along and across the grains of the outer plies should be tested for each thickness and number of plies of SVEZA TOY plywood at least once per month.

5.4 One plywood sheet from any sampling size will be taken for the purpose of formaldehyde emissions monitoring.

Formaldehyde emissions in each emissions group shall be tested using the gas analysis method at least once every 7 days.

Formaldehyde emissions using the chamber method per ASTM D6007 are monitored annually in an independent accredited laboratory in accordance with the requirements of the CARB ATCM and EPA TSCA Title VI regulations. The operational monitoring of formaldehyde emissions for each batch of plywood is performed by comparing the values obtained by using the chamber method in an independent laboratory with the corresponding value obtained by using the gas analysis method in the test laboratories that produced that batch of SVEZA TOY plywood..

5.5 The lot is considered as compliant to the applicable requirements of the standard and is accepted, provided that in the samples:

— the number of SVEZA TOY plywood sheets not complying with the standard requirements in terms of dimensions, out-of-squareness, out-of-straightness, wood defects, and processing defects, shall be less than or equal to the acceptance number established in Table 5;

— there are no sheets in the sample having blisters, ply splitting, or bark patch;

— physical and mechanical parameters are compliant with the ranges set forth in Table 4;

— formaldehyde emissions are compliant with the limits set forth in Table 3.

6 TEST METHODS

6.1 Sampling procedure — as per GOST 9620, GOST 27678, GOST 32155, GOST 30255, [1]—[2], [6].

6.2 SVEZA TOY plywood length and width are measured at two points parallel to the edges, at least 100 mm from edges with a metal measuring tape according to GOST 7502 with an error of 1 mm. The arithmetic mean value of the two measurements is considered the actual length (width) of the sheet.

6.3 SVEZA TOY plywood thickness is measured at least 25 mm from edges, in the middle of each sheet's face.

The arithmetic mean value of the four measurements is considered the actual thickness of the sheet.

The following devices are used for thickness measurement:

— thickness gauge as per GOST 11358 with a scale division not exceeding 0.1 mm;

— micrometer as per GOST 6507 with a scale division not exceeding 0.1 mm;

Thickness difference in one SVEZA TOY plywood sheet is defined as the difference between the maximum and the minimum thickness of the four measurements.

6.4 Out-of-squareness of a sheet of SVEZA TOY plywood

6.4.1 Out-of-squareness of SVEZA TOY plywood sheet shall be measured as per GOST 30427. Out-of-squareness shall be measured with an L-square as per GOST 3749 and defined by measuring the maximum deviation of the sheet edges from the L-square surface using a metal ruler in accordance with GOST 427 with an error of 1 mm.

6.4.2 Out-of-squareness may be also determined by the difference of diagonal lines of the sheet measured by metal measuring tape as per GOST 7502 with a scale division 1 mm.

6.5 Out-of-straightness of a SVEZA TOY plywood sheet's edges shall be determined by measuring the maximum gap between the sheet's edge and the edge of the metal ruler using a feeler gauge according to GOST 8925 with an error of 0.2 mm.

6.6 Warping shall be checked with a ruler as per GOST 427 placed over the diagonal of the SVEZA TOY plywood sheet on a level horizontal surface, and measurement of maximum deflection with a feeler gauge as per GOST 8925 with an error of 1 mm.

6.7 Moisture — GOST 9621, [3].

6.8 Shear strength through adhesive layer — as per GOST 9624, [4].

6.9 Modulus of elasticity in static bending and strength — per GOST 9625, [5].

6.10 Formaldehyde content complies with GOST 27678 (this method is used as a reference), and formaldehyde emissions into the environment comply with GOST 30255, GOST 32155 and [1].

6.11 Tensile strength perpendicular to the panel surface - [6].

6.12 Surface roughness — as per GOST 15612.

6.13 Measurement of wood flaws and processing defects as per GOST 30427 and GOST 2140.

7 TRANSPORTATION AND STORAGE

7.1 SVEZA TOY plywood should be transported in enclosed vehicles according to the haulage rules applicable to the respective means of transport.

Contact with moisture should be avoided during transportation in order to avoid changes in geometry, physical parameters and quality of the SVEZA TOY plywood, and in order to keep emission class stable.

7.2 Storage of SVEZA TOY plywood.

The SVEZA TOY plywood must be stored indoor in stacks placed horizontally on pallets or on wooden shims, at a temperature between $-40\text{ }^{\circ}\text{C}$ and $+50\text{ }^{\circ}\text{C}$ and relative humidity up to 80%.

8 MANUFACTURER'S WARRANTY

The manufacturer guarantees conformance of SVEZA TOY plywood to the quality requirements hereby if transportation and storage conditions are satisfied.

INT/FK grade SVEZA TOY plywood has a guaranteed shelf life of 3 years and the EXT/FSF grade plywood has a shelf life of 5 years following the day of receipt by the customer.

If the SVEZA TOY plywood is to be used for further processing, it is recommended to contact the manufacturer for more details about the properties and specifications of the plywood.

9 SAFETY AND ENVIRONMENTAL REQUIREMENTS

9.1 The content of hazardous chemicals emitted into residential or public building air during use of SVEZA TOY plywood products must not exceed requirements under items [8], [9].

9.2 Requirements [10] and [12] for products manufactured using SVEZA TOY plywood shall be achieved by manufacturing solutions and protective coatings by manufacturers of such products.

9.3 SVEZA TOY plywood must be manufactured using materials and components approved by the national sanitary and epidemiological inspection authorities.

9.4 Only persons age 18 and older with a clean bill of health are allowed to work in SVEZA TOY plywood production. Medical examinations are conducted according to the applicable instructions from the Ministry of Health of the Russian Federation.

9.5 Personnel engaged in SVEZA TOY plywood manufacturing must be provided with personal protective equipment according to the applicable regulations under GOST 12.4.011.

9.6 Specific activity of Cesium 137 in SVEZA TOY plywood must not exceed health standards set forth in [11].

9.7 The standard SVEZA TOY plywood composition does not include raw materials or components classified as hazardous waste.

9.8 SVEZA TOY plywood usually has a long service life, and there are a number of ways to recycle it. SVEZA TOY plywood must be recycled taking into account the ordinances regarding recycling in the effective laws of various countries.

APPENDIX A
(mandatory)

**Limit values for wood flaws and processing defects — as per GOST 30427 for outer plies
of SVEZA TOY plywood**

Limit values for wood flaws and processing defects as per GOST 30427 for outer plies of SVEZA TOY plywood are presented in Table A.1

Table A.1

WOOD FLAWS AND PROCESSING DEFECTS	B (I)	BB (II)	CP (III)	C (IV)
1. Pin knots	allowable			
2. Sound knots, intergrown, light and dark	allowable: up to 15 mm in diameter, with cracks up to 0.5 mm wide, no more than 5 per m ²	allowable: up to 25 mm in diameter with cracks up to 1 mm wide, no more than 10 per m ²	allowable: with a crack up to 1.5 mm in width	allowable
3. Partially intergrown knots	allowed within the number of par. 4 of this appendix, up to 6 mm in diameter, 3 per m ² maximum		intergrown knots up to 15 mm in diameter, 10 per m ² maximum — allowed	allowable: any number with a diameter up to 40 mm
4. Black knots, loose knots, knot holes (no bark inclusions)	allowed, including intergrown knots up to 6 mm in diameter, 3 per m ² maximum	allowed, including intergrown knots up to 6 mm in diameter, 6 per m ² maximum	allowable: any number with a diameter up to 6 mm	allowable: any number with a diameter up to 40 mm (bark patches up to 5 mm wide are allowed near the knot)
5. Closed cracks	allowable: up to 5 per meter of sheet width, up to 200 mm long	allowable: up to 5 per meter of the sheet width, up to 300 mm long	allowable: cracks along the edge and middle	

Table A.1 — continued

FLAWS IN WOOD AND PROCESSING DEFECTS	B (I)	BB (II)	CP (III)	C (IV)
6. Open cracks, open seam on spliced veneer	not allowable	allowable: up to 3 per meter of the sheet width, up to 250 mm long and up to 2 mm wide	allowable: up to 600 mm long and up to 2 mm wide, no more than 2 per meter of the sheet width + allowable: up to 600 mm long and up to 5 mm wide, provided these are filled with sealing agents	allowable: up to 800 mm long and up to 10 mm wide, no limitation on number
7. Timber structure flaws (diagonal grain, swirly grain, burls, bud traces)	allowable			
8. Timber structure flaws (light/dark inner inbark)	only light inbark is allowable; dark inbark is allowable in a number and size corresponding to the number of black knots	light inbark allowable; dark inbark allowable within the dimensions of intergrown knots		
9. Timber structure flaws (surface inbark)	allowable: with the total number under the black knot requirements			
10. Sound discoloration (false heartwood)	not allowable	allowable: up to 25 % of the surface	allowable	allowable
11. Heavy discoloration (stains, streaks, streak traces)	Allowable: light, up to 15 % of the sheet surface area	allowable		
12. Heavy discoloration (grouped streaks)	Allowable: light, up to 15 % of the sheet surface area	allowable		

Table A.1 — continued

WOOD FLAWS AND PROCESSING DEFECTS	B (I)	BB (II)	CP (III)	C (IV)
13. Chemical colorations, sap stains (blue and colored sap stains), wood discoloration after storage	allowable: up to 30 % of the sheet surface	allowable		
14. Biological damage (wormholes)	allowable within the total number under the black knot requirements			
15. Discoloration with partial wood integrity damage	not allowable			
16. Knot and hole patching, using wood inserts before pressing	not allowable	allowable: butterfly-shaped inserts, no more than 8 inserts per m ² , provided that the timber color and grain direction are similar to those of the face layer	allowable: butterfly-shaped inserts with a 1 mm gap on one side or a 0.5 mm gap on both sides	allowable: butterfly-shaped inserts
17. Double insert (Double patch)	not allowable	allowable: no more than 1 per m ²	allowable	
18. Open crack patching, using sealing agents or veneer patches	not allowable			
19. Faceplate bulges (imprinted)	not allowable	allowable: up to 3 mm wide, no more than 3 per sheet	allowable: up to 5 mm wide in total not more than 5 per sheet	allowable
20. Overlaps	not allowable	allowable: up to 1 per meter of the sheet width, up to 100 mm long and up to 2 mm wide	allowable: up to 2 per meter of the sheet width, up to 300 mm long and up to 2 mm wide	allowable

Table A.1 — continued

WOOD FLAWS AND PROCESSING DEFECTS	B (I)	BB (II)	CP (III)	C (IV)
21. Stains from manufacturing (beam traces, strips)	not allowable	allowable: up to 10 % of the surface	allowable	
22. Glue staining	not allowable	allowable: up to 2 % of the surface	allowable: up to 5 % of the surface	allowable
23. Mechanical damage (cuts, holes)	allowable within the total number under the black knot requirements			
24. Scratches, ribs, blows, ridges	not allowable		allowable: up to 120 mm long, 10 mm wide and 0.5 mm in height (depth)	allowable
25. Warping	not considered for plywood up to 6.5 mm thick; no more than 15 mm per 1 m of the plywood sheet diagonal length is allowable for plywood more than 6.5 mm thick			
26. Presence of glue line	not allowable		allowable	
27. Blisters, delamination (also when bent), bark patches	not allowable			
28. Unsanded stains (non-uniform sanding)	not allowable			allowable: up to 50 % of surface
29. Oversanding of face plies	not allowable		allowable: up to 1 % of the surface	allowable
30. Metal inclusions	not allowable		brackets of non-ferrous metals are allowable	
31. Edge defects caused by trimming, missing veneer	not allowable	allowable: no more than 2 mm		allowable: no more than 10 mm
32. Rough peeling	not allowable	up to 5 % of the surface — allowable	up to 15 % of the surface — allowable	allowable
33. Waviness (for sanded plywood), saw cut roughness, rippling	not allowable		allowable	

Table A.1 (end)

WOOD FLAWS AND PROCESSING DEFECTS	B (I)	BB (II)	CP (III)	C (IV)
34. Surface roughness	roughness parameter R_m up to 100 (μm) per GOST 7016			
35. Pocket (no bark inclusions)	not allowable	allowable, within the total number under the requirements of par. 12 of this appendix	allowable	
36. Glued veneer particles	not allowable		allowable: up to 150 mm long and 30 mm wide, no more than 1 per sheet	allowable

Note: Any defects not specified in Appendix A are not allowed.

**APPENDIX B
(mandatory)**

Terms and definitions of processing defects of the outer plies of SVEZA TOY plywood

Terms and definitions of processing defects of external layers of the SVEZA TOY plywood are specified in Table B.1

Table B.1

Name of the processing defect	Description
Glued veneer particles	Veneer particles glued to or pressed into plywood surface
Rough peeling	Dense small surface recessions caused by local removal of wood during peeling
Pocket	a cavity in the wood or between annual layers filled with resin or gum

APPENDIX C
(mandatory)

Grade designators of SVEZA TOY plywood

Grade designation of SVEZA TOY plywood is presented in Table C.1

Table C.1

Latin Letters	Roman Numerals	Text on the label in the “Grade” column
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)

References

- [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 quality control. Part 1. Testing sample selection and cutting, expressing test results
- [3] EN 322:1993 Wood-based panels. Determination of moisture content
- [4] EN 314-1:2004 Plywood. Bond quality. Part 1. Test methods
- [5] EN 310:1993 Wood-based panels. Determination of the modulus of elasticity in bending, and of bending strength
- [6] DIN EN 319:1993 Particleboards and fiberboards. Determination of tensile strength perpendicular to the plane of the panel
- [7] ASTM D6007-02 Standard Test Method for Determining Formaldehyde Concentration in Air from Wood Products Using a Small Scale Chamber
- [8] GN 2.1.6.3492-17 Maximum allowable concentrations (MAC) of pollutants in the atmospheric air of urban and rural settlements
- [9] GN 2.1.6.2309-07 Tentative safe exposure levels (TSEL) of pollutants in the atmospheric air of populated places. Health standards
- [10] TP TC 025/2012 Customs Union Technical Specification
On Safety of Furniture Products
- [11] Unified sanitary epidemiological and health standards for goods subject to sanitary and epidemiological control approved by the Customs Union Commission decision No. 299 as of May 28, 2010
- [12] TP TC 008/2011 On safety of toys

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