МЕЖГОСУДАРСТВЕННЫЙ СОВЕТ ПО СТАНДАРТИЗАЦИИ, МЕТРОЛОГИИ И СЕРТИФИКАЦИИ (МГС)
INTERSTATE COUNCIL FOR STANDARDIZATION, METROLOGY AND CERTIFICATION (ISC)

INTERSTATE STANDARD

GOST 4598-2018

FIBRE BOARDS BY WET WAY OF PRODUCTION
Specifications

(EN 13986:2004+A1:2015, NEQ)

Official Edition

Moscow
Standartinform
2018

FOREWORD

The objectives, key principles and core procedures of interstate standardization are set forth in GOST 1.0—2015: Interstate Standardization System. Key Provisions and GOST 1.2—2015: Interstate Standardization System. Interstate Standards, Rules and Recommendations on Interstate Standardization. Development, Adoption, Update and Cancellation Rules

Standard Details

1 DEVELOPED by LESSERTIKA Forest Product Standardization Center LLC in cooperation with Kronospan LLC
2 INTRODUCED by the Federal Agency on Technical Regulating and Metrology
3 ADOPTED by the Euro-Asian Council for Standardization, Metrology and Certification (Minutes No. 109-P as of May 30, 2018)

Voted for Adoption:

Short Country Name per International Classifier (ISO 3166) 004—97	Country Code per International Classifier (ISO 3166) 004—97	Short Name of the National Standardization Authority
Belarus	BY	Gosstandart of Belarus Republic
Kyrgyzstan	KG	Kyrgyzstandart
Russia	RU	Rosstandart
Tajikistan	TJ	Tajikstandart

4 GOST 4598—2018 has been enacted as the national standard of the Russian Federation as of April 1, 2019 by Order No. 364-st as of June 27, 2018 of the Federal Agency on Technical Regulating and Metrology.
5 This Standard has been developed subject to key regulatory provisions of the European Standard EN 13986:2004 + A1:2015, Wood-based Panels for Use in Construction. Characteristics, Evaluation of Conformity and Marking (NEQ)
6 REPLACES GOST 4598—86

The information on changes hereto shall be published in the National Standards Annual Information Guidebook while the texts of changes and amendments shall be published in the National Standards Monthly Information Guidebook. In case of revision (replacement) or cancellation hereof, the relevant notice shall be published in the National Standards Monthly Information Guidebook. The relevant information, notices and texts shall also be published in the public information system being the official website of the Federal Agency on Technical Regulating and Metrology (www.gost.ru)

Table of Contents

GOST 4598—2018 INTERSTATE STANDARD

ПЛИТЫ ДРЕВЕСНО-ВОЛОКНИСТЫЕ МОКРОГО СПОСОБА ПРОИЗВОДСТВА

Технические условия

Fibre boards by wet way of production. Specifications

Enacted on 04/01/2019

1 Scope

This Standard shall apply to wet processed fibre boards (hereinafter referred to as the boards) manufactured of wood fibre mixed with reinforcing and hydrophobic additives.

The boards are designed for usage in construction; radio industry; railcar construction; production of furniture, trading equipment, packaging, carpentry and other products and structures protected against moistening.

This Standard shall not apply to special-purpose fibre boards (bitumen coated, bio resistant, extra-fireproof, etc.) or boards with coated or painted surfaces.

The requirements hereof shall be binding on all economic actors.

2 Regulatory References

This Standard uses the following regulatory references to the following standards:

GOST 12.1.004—91 Occupational Safety Standards System. Fire Safety. General Requirements

GOST 12.1.005—88 Occupational Safety Standards System. General Sanitary Requirements for Working Zone Air

GOST 12.1.044—89 (ISO 4589—84) Occupational Safety Standards System. Fire and Explosion Hazards of Substances and Materials. Nomenclature of Indices and Methods of Their Determination

GOST 12.2.003—91 Occupational Safety Standards System. Industrial Equipment. General Safety Requirements

GOST 12.4.021—75 Occupational Safety Standards System. Ventilation Systems. General Requirements

GOST 12.3.042—88 Occupational Safety Standards System. Woodworking manufacture. General Safety Requirements

GOST 12.4.011—89 Occupational Safety Standards System. Means of protection. Classification and general requirements

GOST 15.009—91 Product Development and Commercialization System. Non-Food Consumer Goods

GOST 166—89 (ISO 3599—76) Vernier Calipers. Specifications

GOST 427—75 Measuring metal rules. Specifications

GOST 577—68 Clock-type Dial Indicators Graduated in Unit Divisions of 0.01 mm. Specifications

GOST 7016—2013 Products of Wood and Wood Materials. Roughness Parameters

GOST 7076—99 Building Materials and Products. Method of Determination of Steady-state Thermal Conductivity and Thermal Resistance

Official Edition

GOST 8026—92 Levelling rules. Specifications
GOST 10633—2018 Wood-shaving and Wood-fiber Plates. General Regulations in Testing Physical and Mechanical Properties
GOST 10636—2018 Wood-shaving and Wood-fiber Plates. Strength Definition Method at Stretching Perpendicularly Plate Layer
GOST 10905—86 Surface Plates and Face-plates. Specifications
GOST 14192—96 Marking of Cargoes
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 20736—75 Sampling Inspection by Variables. Control Plans*
GOST 26433.1—89 System of Ensuring Geometrical Parameters Accuracy in Construction. Rules of Measurement. Prefabricated Elements
GOST 27678—2014 Wood-based Panels and Plywood. Perforation Method for Determination of Formaldehyde Content
GOST 27680—88 Particle and Fibre Boards. Methods of Shape and Dimensions Control
GOST 30244—94 Building materials. Methods for Combustibility Test**
GOST 30402—96 Construction Materials. Ignitability Test Method
GOST 30255—2014 Furniture, Timber and Polymers. Method for Determination of Formaldehyde and Other Volatile Chemicals in the Air of Climatic Chambers
GOST 30444—97 Building Materials. Spread Flame Test Method
GOST 32155—2013 Wood-based Panels and Plywood. Determination of Formaldehyde Release by the Gas Analysis Method

Note. When using this Standard, it shall be practicable to check validity of the reference standards in the public information system being the official website of the Federal Agency on Technical Regulation and Metrology in the internet or in the National Standard Annual Information Guidebook published as at January 1 of the current year, and issues of the National Standards Monthly Information Guidebook for the current year. If the reference standard is amended (replaced) using the Standard should rely on the replacing (amended) standard. If the reference standard is cancelled without replacement the provision referring to such cancelled standard shall apply in part not covering the reference.

3 Classes, Key Parameters and Dimensions

3.1 Depending on intended uses thereof, the boards are divided into hard and soft ones. Depending on strengths, densities and faces thereof, hard boards are divided into the following grades:
- T — hard boards with unrefined faces;
- T-V — improved water resistance hard boards with unrefined faces;
- T-S — hard boards with faces of finely dispersed pulp;
- T-SV — improved water resistance hard boards with faces of finely dispersed pulp;
- T-P — hard boards with painted faces;
- T-SP — hard boards with painted faces of finely dispersed pulp;
- ST — improved strength (extra hardness) hard boards with unrefined faces;

* In the Russian Federation the following standard is applicable: GOST R ISO 3951-1—2015 Statistical Methods. Sampling Procedures for Inspection by Variables. Part 1. Specification for Single Sampling Plans Indexed by AQL for Lot-by-lot Inspection for a Single Quality Characteristic and a Single AQL.

** In the Russian Federation the following standard is applicable: GOST R 57270—2016 Building Materials. Methods for Combustibility Tests.

- ST-S — improved strength (extra hardness) hard boards with faces of finely dispersed pulp;
- NT — reduced density hard boards (semi-hard);
- NT-S — semi-hard boards with faces of finely dispersed pulp;
- NT-P — semi-hard boards with painted faces;
- NT-SP — semi-hard boards with painted faces of finely dispersed pulp.

Hard boards of T, T-S, T-P and T-SP grades are divided into A and B quality groups depending on their physical and mechanical properties. Boards of these grades are divided into sorts I and II.

Soft boards are divided into grades M-1, M-2 and M-3 depending on their densities.

3.2 Scopes of various board grades shall be set forth in regulatory and technical documents for specific product types as approved by national sanitation and hygiene supervisors.

Painted grade ST, T-V and T-SV boards may be used in flooring, outdoor and balcony door structures.

3.3 Dimensions and dimension tolerances of fiberboards must comply with the ones set forth in Table 1.

Table 1 mm

Parameter	Fiberboards			
	Hard and Semi-Hard		Soft	
	Value	Tolerance	Value	Tolerance
Length	610 to 6000	± 5	610 to 5500	± 5
Width	610 to 3000	± 3	1220	± 5
Thickness	2 to 10	± 0.3	8.0 to 16	± 1

3.4 Board Designations

Board designations must include grades, quality groups, sorts, formaldehyde emission classes, length, width and thickness dimensions, and the designation hereof.

Sample Designation:

Hard board with painted face of finely dispersed pulp (T-SP), quality group B, sort II, emission class E1, rated dimensions3050 × 2140 × 3.2 mm:

Fiberboard, T-SP, group B, sort II, E1, 3050 × 2140 × 3.2 GOST 4598—2018

Improved strength fiberboard with rated dimensions of 3050 × 1220 × 4.0 mm:

Fiberboard, ST, E1, 3050 × 1220 × 4.0 GOST 4598—2018 Soft board with density of 300 to 400 kg/m^3 and rated dimensions of 1800 × 1220 × 12.0 mm:

Fiberboard, M-1, E1, 1800 × 1220 × 12 GOST 4598—2018

4 Technical Requirements

4.1 Specifications

4.1.1 Boards should be manufactured in accordance with the requirements hereof, and duly approved process documents.

4.1.2 Tolerances of rated dimensions must comply with the ones set forth in Table 1.

4.1.3 Boards must have right angles. Out-of-squareness of edges measured in sections 1000 mm long must not exceed 2 mm, or the diagonal difference must not exceed 0.2% of the board length.

4.1.4 Board edges must be straight. Out-of-straightness measured in individual sections 1000 mm long must not exceed 1 mm.

4.1.5 Fire safety documents for each board grade of the treaty member countries must set forth the following fire safety parameters: combustibility group identification, surface flame spread, smoke production capacity, combustion product toxicity, and flammability.

4.1.6 Values of physical and mechanical properties of boards must comply with the rules set forth in Table 2.

Table 2

Parameter Name	Regulatory Value for Board Grade							
	ST, ST-S	T-V, T-SV	T, T-P, T-S, T-SP		NT-P, NT-S, NT-SP	M-1	M-2	M-3
			Group A	Group B				
1 Density, kg/m^3	950 to 1100	850 to 1100	850 to 1100	800 to 1100	at least 600	200 to 400	200 to 350	100 to 200
2 Ultimate Bending Strength, MPa: $T_{и2}$, at least	47	40	38	33	15	1.8	1.1	0.4
3 Thickness Bloating for 24 hours, %, not to exceed	13	10	20	23	30	Not regulated		
4 Moisture Content, % T_H	3	4	4	4	3	Not regulated		
$T_в$	10				12			
5 Water Absorption for 2 hours, % T_B	Not regulated					34		
6 Face Water Absorption for 24 hours, %, not to exceed	7	7	11	13	25	Not regulated		
7 Ultimate Tensile Strength Perpendicular to Face, MPa, at least	0.40	0.35	0.32	Not regulated				
Notes 1 Regulated face water absorption values apply to boards with faces of finely dispersed pulp as well as to ST grade boards. 2 If required by consumers, bottom moisture content values of T, T-P and T-SP group A boards may be 5%. 3 T_H and T_B are lower and upper value limits, respectively.								

4.1.7 Heat Conduction Factor of Soft Boards (Reference Value), W/(m • K):

- 0.05 for M-3 grade boards;
- 0.07 for M-2 grade boards; and
- 0.09 for M-1 grade boards.

4.1.8 Threshold limit values of formaldehyde content in boards and formaldehyde emissions into air for emission classes E0.5, E1 and E2 must not exceed the values set forth in Table 3. Boards made of formaldehyde-free materials qualify as class E0.5 with no testing.

Table 3

Formaldehyde Emission Class	Testing Method	Formaldehyde Threshold Limit Value	Testing Appointment
E0.5	GOST 30255 chamber method	Max 0.08 mg/m^3 of air	Qualification and Control Testing
	GOST 32155 gas analysis method	Max. 0.8 mg/m^2/hour	Production Control
E0.5	GOST 27678 perforation method	Max 4.0 mg/100 g of absolutely dry board	Production Control, Qualification and Control Testing
E1	GOST 30255 chamber method	0.08 to 0.124 mg/m^3 of air	Qualification and Control Testing
	GOST 32155 gas analysis method	0.8 to 1.5 mg/m^2/hour	Production Control
	GOST 27678 perforation method	4.0 to 8.0 mg/100 g of absolutely dry board	Production Control, Qualification and Control Testing
E2	GOST 30255 chamber method	0.124 to 0.3 mg/m^3 of air	Qualification and Control Testing
	GOST 32155 gas analysis method	1.5 to 3.5 mg/m^2/hour	Production Control
	GOST 27678 perforation method	8.0 to 30 mg/100 g of absolutely dry board	Production Control, Qualification and Control Testing
Notes 1 Board formaldehyde content set forth for boards with absolute moisture content W= 6.5%. For boards with other absolute moisture content values (ranging from 3% to 10%), the formaldehyde content value set forth in the table must be multiplied by factor F calculated using equation F = -0.133W + 1.86. 2 Formaldehyde content value in emission class E1 boards for the half-annual testing period must not exceed the mean value of 6.5 mg in 100 g of absolutely dry board.			

4.1.9 Board face roughness R_{zmax} must not exceed 100 μm per GOST 7016.

4.1.10 Any and all board grades must have no laminations, burnouts, edge burrs or foreign inclusions. Board faces must have the same color tones and homogenous structures of evenly ground fibers.

4.1.11 Surface quality parameters of hard and semi-hard boards must comply with the regulatory values set forth in Table 4.

Table 4

Defect Name	Board Defect Quantities and Dimensions	
	Sort I	Sort II
1 Dents (protrusions): in face surfaces	Not acceptable	Depths (heights) exceeding thickness tolerances are not acceptable
Non-face surfaces	Depths (heights) exceeding thickness tolerances are not acceptable if there are more than 2 of them with a total area of 25 cm^2 per 1 m^2	Not regulated

Table 4 (ending)

Defect Name	Board Defect Quantities and Dimensions	
	Sort I	Sort II
2 Face Scratches	More than 2 pieces with a total length over 100 mm within 1 m^2 are not allowed.	Not regulated
3 Face Shading	Areas over 5% of board area are not allowed	Not regulated
4 Face Water Stains	Total areas over 5 cm^2 are not allowed within 1 m^2	Not regulated
5 Edge Fissures and Local Damages	Not allowed (singular face ones not more than 2 mm long or singular edge ones not more than 15 mm long are not taken into account)	Depths over 5 mm are not allowed
6 Production Stains	Total areas over 10 cm^2 are not allowed within 1 m^2	
Note. Boards may be manufactured with face quality parameters compliant with samples approved by the manufacturer and consumer, including for export shipments.		

4.1.12 Soft boards may have dents (protrusions), fissures and local edge damages within board length, width and thickness tolerances.

4.1.13 Face color and beating values must comply with reference samples. For reference sample requirements, and tag shapes, please kindly see GOST 15.009.

4.1.14 The allowed specific activity level of cesium-137 radionuclides in boards (radiation safety parameter) must comply with the regulations adopted by national sanitation and hygiene supervisors and not exceed 1850 Bq/kg.

4.1.15 Non-face surfaces (screen sides) of boards shall not be coated (painted).

4.2 Raw Material and Supply Requirements

4.2.1 Each batch of raw materials and supplies must have its analytical datasheet indicating percentage contents of harmful substances, volatile portions thereof, and safety precautions during handling thereof and operations with them.

Materials utilized for manufacture of wet processed fiberboards must be authorized by national sanitation and hygiene supervisors.

4.2.2 Radiation evaluation of wooden raw materials shall be performed relying on the radiation survey protocol issued by the supplier. In absence of such radiation survey, the manufacturer must identify cesium-137 content once per year and on each supplier change.

4.3 Associated Documents

Each shipment of boards of the same type, grade, group and sort must be accompanied with the quality document (datasheet) certifying compliance of the shipment with the requirements hereof, and indicating the following:

- the name of the organization the system of which includes the manufacturer;
- the manufacture date;
- the shipment number;
- the board manufacturer name and (or) its trademark, and address;
- board designation;
- board fire safety parameters;
- board quantity in the shipment, total area in square meters accurate to 0.01 m^2; and
- technical control stamp.

The accompanying documents in waterproof enclosures shall be attached to visible locations of the products.

4.4 Labeling

Boards supplied to traders shall have labels indicating the following if required by traders:
- name and (or) trademark of the manufacturer;
- board designation;
- linear dimensions;
- quantity of boards in the package;
- designation hereof; and
- the manufacture date, and shift number.

Board packages must have transportation labeling per GOST 14192 including the Keep Dry handling sign.

4.5 Packaging

4.5.1 Boards may be supplied to consumers either packaged or not packaged.
4.5.2 Board shall be packaged in accordance with process instructions developed and approved by the manufacturer.
4.5.3 Packaging must ensure protection of boards against dirt and mechanical damages as well as ensure stable shape of the package during transportation and cargo handling operations.
4.5.4 Exported boards shall be packaged and labeled in accordance with technical documents approved by foreign trade organizations or consumers.

5 Safety and Environmental Protection Requirements

5.1 Boards shall be manufactured using materials and components usage whereof is authorized by national sanitation and epidemiology supervisors.
5.2 Chemical (other than formaldehyde, see 4.1.8) contents in boards must not exceed threshold limit values of chemical emission into air for specific products as set forth in regulatory documents of national sanitation and epidemiology supervisors.
5.3 Chemical contents in working premises air must not exceed threshold limit values (TLV) for the working area as set forth in regulatory documents of national sanitation and epidemiology supervisors.
5.4 Boards must be manufactured in accordance with safety requirements set forth in GOST 12.1.004, GOST 12.1.005, GOST 12.2.003, GOST 12.3.042, and GOST 12.4.021.
5.5 Hazardous atmospheric emissions in the course of board manufacture must not exceed threshold limit values of the emissions set forth in regulatory documents of national sanitation and epidemiology supervisors.
5.6 Board manufacture waste shall be disposed of in accordance with technical documents of national sanitation and epidemiology supervisors.
5.7 Persons associated with board manufacture must have personal protection equipment in accordance with GOST 12.4.011.

6 Acceptance Rules

6.1 Boards are presented for acceptance in batches. A batch shall mean a quantity of boards of the same grade and size manufactured under the same process conditions within one shift and documented with one quality document.
6.1.1 Acceptance and transfer as well as regular testing of the boards' compliance with the requirements hereof shall be performed. All boards shall undergo acceptance and transfer testing of their compliance with requirements hereof to moisture content, water absorption, thickness bloating, geometrical parameters (4.1.1 to 4.1.4), surface quality, visual (4.1.10, 4.1.11) and roughness indicators (4.1.9).

6.1.2 Density, face water absorption, ultimate bending strength and ultimate tensile strength perpendicular to face shall be tested at least once every two weeks as well as on each board manufacture process change.
Formaldehyde content shall be tested in samples taken from the same board at least once per week with the perforation method for emission class E2 boards and at least once every 24 hours with the perforation methods for emission class E1 and E0.5 boards as well as at least once per quarter with the chamber method and (or) gas analysis method.
6.1.3 Fire safety parameters of boards shall be tested when
the products are commercialized or when raw materials or manufacturing processes of the products change.
6.2 Boards for control and testing are sampled using the random blind sampling method per GOST 18321.
6.3 Length, width, thickness, straightness and squareness as well as surface quality and visual indicators of the boards are tested using the statistical acceptance sampling by attributes in accordance with the regulatory documents*.
The sampling scope shall be determined in accordance with the requirements of Table 5.

Table 5

Batch Size	Tested Parameter			
	Dimensions, Straightness and Squareness of Edges		Surface Quality and Visual Indicators	
	Sampling Scope (Special Testing Level S-3)	Acceptance Value*	Sampling Scope (General Testing Level S-1)	Acceptance Value*
Max 500	8	1	20	3
500 to 1200	13	2	32	5
1200 to 3200	13	2	50	7
3200 to 10000	20	3	80	10
* Acceptance value shall mean the quantity (maximum) of defective boards for the specific sampling scope.				

6.4 Physical and mechanical properties of the boards shall be tested using the statistical acceptance control by variables in accordance with GOST 20736.
The sampling scope shall be determined in accordance with the requirements of Table 6.

Table 6

Batch Size, pcs.	Sampling Scope, pcs. (Special Testing Level S-3)	Acceptance Constant, k_s
Max 280	3	0.958
281 to 500	4	1.01
501 to 1200	5	1.07
1201 to 3200	7	1.15
3201 to 10000	10	1.23

6.5 The batch scope shall be determined by the number of maximum format boards during the manufacture acceptance of the batch.
6.6 To evaluate the board batch by each of the indicators such as density, ultimate bending strength, thickness bloating, moisture content and water absorption, the sample mean shall be calculated for each board $\bar{X}_i$ using the following equation:

* In the Russian Federation the following standard is applicable: GOST R ISO 50779.52—95 Statistical Methods. Acceptance Sampling by Attributes.

$$\overline{X}_i = \frac{1}{m}\sum_{j=1}^{m} X_{ij}, \quad (1)$$

where X_{ij} is the value of indicators of the *y*-th sample / *y*-th board from the sample; *n* is the quantity of the boards in the sample; *m* is the number of specimens sampled from each board.

The sample mean shall be calculated for the same parameters except for density for all the specimens X using the following equation

$$\overline{\overline{X}} = \frac{1}{n}\sum_{i=1}^{n} X_i \quad (2)$$

or

$$\overline{\overline{X}} = \frac{1}{(n \cdot m)}\sum_{i=1}^{n}\sum_{j=1}^{m} X_{ij}, \quad (3)$$

where X_{ij} is the value of parameters of the *y*-th specimen / *y*-th board from the sample; *n* is the quantity of boards in the sample; and *m* is the number of specimens sampled from each board. The root mean square deviation of the sample means for the board for the parameters other than density, S using the equation

$$S = \sqrt{\frac{1}{n-1}\sum_{i=1}^{n}(\overline{X}_i - \overline{\overline{X}})^2} \quad (4)$$

or

$$S = \sqrt{\frac{1}{n-1}\sum_{i=1}^{n}\overline{X}_i^2 - \frac{1}{n}\left(\sum_{i=1}^{n}\overline{X}_i\right)^2}, \quad (5)$$

where *n* is the quantity of boards in the sample; $\overline{X}_i$ is the sample mean for each board;

$\overline{\overline{X}}$ is the sample mean for all the specimens. The lower and upper limits of the controlled parameters Q_H and Q_B (other than density) shall be calculated where at least one value X is not compliant with the limit value set forth in Table 2 using the following equations:

$$Q_H = (\overline{\overline{X}} - T_H)/S \quad (6)$$

and

$$Q_B = (T_B - \overline{\overline{X}})/S, \quad (7)$$

where Q_H and Q_B are the lower and upper values of the controlled parameter, respectively;

T_H and T_B are the lower and upper limits of the controlled parameter set forth in Table 2.

Q_H and Q_B values for each physical and mechanical parameter equals to or exceeds the acceptance constant k_s set forth in Table 6.

6.7 The sample must include no burnt or laminated boards.

The number of the boards from among the ones sampled for control of dimensions, straightness, squareness, surface appearance and quality in accordance with clauses 4.1.2 to 4.1.14 that are not compliant with the requirements, at which number the batch is rejected, must not exceed the value set forth in Table 5.

Q_H and Q_B values for each parameter calculated using equations (6) and (7), including the results of the most recent testing of face water absorption, and ultimate tensile strength perpendicular to the face must be not less than the acceptance constant k_s set forth in Table 6.

6.8 If the face water absorption value for boards with faces of finely dispersed pulp does not comply with the requirements set forth herein, the board surface shall be deemed unrefined, and no index S shall be assigned to the grade.
6.9 The consumer may perform control quality inspection of boards in accordance with acceptance rules and using testing methods set forth herein.

7 Testing Methods

7.1 Board specimens shall be sampled and prepared, physical and mechanical properties of boards shall be tested in accordance with GOST 10633 and with requirements hereof.
7.2 Dimensions shall be tested in accordance with GOST 27680.
7.3 Board surface roughness (4.1.9) shall be tested in accordance with GOST 15612.
7.4 Moisture content of the boards moistened in moistening machines shall be tested at least 24 hours after completion of their manufacture in accordance with GOST 10633.
7.5 Face color and beating shall be evaluated visually by benchmarking against reference specimens under clause 4.1.13 at a distance of one meter and under natural lighting.
7.6 Edge out-of-straightness shall be tested in accordance with GOST 27680 or using the methods set forth in GOST 26433.1. Measurements shall be performed at least at three places along the lengths of two adjacent edges with the accuracy not exceeding 0.3 mm.
7.7 Out-of-squareness and diagonal length difference shall be tested in accordance with GOST 27680 or using the methods set forth in GOST 26433.1. Edge out-of-squareness shall be measured by the four corners. The accuracy of out-of-squareness and diagonal length difference shall not exceed 1 mm.
7.8 The ultimate tensile strength perpendicular to board face shall be tested in accordance with GOST 10636.
7.9 The area of stains in the board surface shall be determined with the accuracy not exceeding 0.25 cm^2 using the transparent 5 mm square mesh sheet.
The accuracy of the mesh lines shall deviate by not more than 0.5 mm.
When calculating the number of cells covered with the stain, the cells covering over one half of the stain area shall be deemed complete ones and those covering less than one half shall not be taken into account.
7.10 Dent depths and protrusion heights shall be tested using ICh-10 grade dial type indicators per GOST 577 fixed in metal U-shaped brackets with cylindrical bearing surfaces with radii of (5 ± 1) mm and inter-support spans of 60 to 100 mm.
Indicator scales shall be set to zero when brackets are installed onto the straight edge in accordance with GOST 8026 or levelling plate in accordance with GOST 10905.
The rod stroke on both sides of the bearing plane must be at least 2 mm.
7.11 Linear dimensions of defects shall be determined using metal yardsticks per GOST 427 with scale intervals of 1 mm and calipers per GOST 166 with errors not exceeding 0.1 mm.
7.12 Face water absorption, density, ultimate bending strength, moisture content, water absorption, and thickness bloating shall be tested in accordance with GOST 10633.
7.13 The heat conductivity factor of soft boards shall be tested in accordance with GOST 7076 at construction material testing laboratories accredited with national accreditation authorities.
7.14 Content of hazardous substances emitted into the environment by boards in storage shall be tested in accordance with GOST 30255 and/or GOST 32155 at least once every half-year and on each recipe change under GOST 30255 and/or GOST 32155.
7.15 Board formaldehyde content shall be tested in accordance with GOST 27678 (the perforation method) or regulatory documents adopted by national sanitation and epidemiology supervisors.
7.16 The board sampling procedure for radiation testing should be in accordance with regulatory documents adopted by national sanitation and epidemiology supervisors.
7.17 The specific activity level of cesium-137 radionuclides in boards shall be tested in accordance with methodologies adopted by national sanitation and epidemiology supervisors.

7.18 Board fire hazard parameters shall be tested as follows: in accordance with GOST 30244 for combustibility groups, in accordance with GOST 30444 for surface flame spread, in accordance with GOST 12.1.044 for smoke production capacity and toxicity of combustion products, and in accordance with GOST 30402 for flammability.

8 Transportation and Storage

8.1 Boards shall be carried in by any transportation means in accordance with cargo carriage rules in force for the specific transportation means, and with mandatory precipitation protection.
8.2 In case of railway carriage thereof, boards should be positioned and fixed in accordance with cargo loading and fixing specifications approved by national transportation authorities.
8.3 Boards in vehicles must be positioned and fixed in such a way that allows to ensure traffic safety, safety of maneuvers and cargo handling operations, integrity of the cargo and vehicles.
8.4 Boards may be carried in containers, transport packages and stacks in accordance with technical documents approved by relevant national transportation authorities, and consumers.
8.5 Boards shall be stored horizontally laid onto even pallets or wooden pads in enclosed premises (ruling out exposure of boards to moisture and hazardous vapors) and sorted by their grades, sorts and dimensions.
8.6 Board storage and warehousing conditions must ensure preservation of board shapes, and rule out mechanical damaged in storage.

9 Manufacturer Warranties

Manufacturers guarantee compliance of boards with requirements hereof provided consumers comply with transportation, storage and usage conditions set forth herein.
The warranty shelf life of boards shall be one year of the manufacture date thereof.

UDK 674-415:006.354 MKS 79.060.10 OKPD2 16.21.14.000 NEQ
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