

WOODEN WORKPIECES FOR EXPORT

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### **Foreword**

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These technical specifications apply to wooden workpieces for export (hereinafter referred to as workpieces) made by sawing.

The list of technical normative legal acts (hereinafter - TNLA), which are referenced in these technical specifications, are indicated in Annex A.

Terms with corresponding definitions are given in Annex B.

The abbreviations used in this specification are given in Annex C.

The designation of workpieces in other documents and when ordering must consist of the name of the product, species, wood, a letter denoting the grade, digital designation of nominal dimensions (thickness, width, length) and designation of these technical specifications.

Record example: Wooden workpieces, made of pine wood of grade A, 22 mm thick, 96 mm wide and 4800 mm long.

Wooden workpieces, pine, grade A, 22x96x800 mm - TU BY 100195503.021-2019.

## **1 Technical requirements**

### **1.1 Main parameters and characteristics**

1.1.1 The workpieces must comply with the requirements of these technical specifications and be manufactured according to the technological documentation approved in the prescribed manner.

1.1.2 Blanks are made from coniferous wood (pine, spruce).

1.1.3 Raw materials for the manufacture of workpieces are round coniferous timber according to STB 1711, STB 2316-1, STB 2316-2.

1.1.4 Nominal dimensions of workpieces:

- thickness-13-100 mm;
- width - 40-200 mm;
- length - 500-6500 mm.

The nominal dimensions of the workpieces must be indicated in the specification for the agreement (contract). By agreement with the consumer, it is allowed to manufacture workpieces of other sizes.

1.1.5 The nominal dimensions of the workpieces in terms of thickness and width are set for wood with a moisture content of 20%. When the moisture content of the wood is more or less than 20%, the dimensions of the workpieces are set taking into account the amount of shrinkage in accordance with GOST 6782.1.

1.1.6 Limit deviations from the nominal dimensions of the workpieces:

- in thickness and width  $\pm 1$  mm;
- by length:
  - up to 2.0 m - from 0 to + 5 mm;
  - over 2.0 m - from 0 to +50 mm.

The average values of the thickness and width of the workpieces, taking into account the maximum deviations, must be at least the nominal dimensions. The selection of workpieces in the sample to determine the average values of thickness and width is carried out according to table 2.

By agreement with the consumer, a negative deviation in length is allowed.

1.1.7 By the quality of wood, the timber is of two grades: A and B.

1.1.8 Workpieces are made dry (with a moisture content of not more than 22%), raw (with a moisture content of more than 22%) and moist antiseptic.

1.1.9 The need for antiseptic processing of workpieces is established in the agreement (contract), antiseptic treatment - in accordance with GOST 10950.

1.1.10 Surface roughness parameters of workpieces  $R_{m_{max}}$  according to GOST 7016.

1.1.11 The faces and edges of the workpieces must be parallel. Deviations from parallelism of the seams and edges of the workpieces are allowed within the maximum deviations in thickness and width.

Zam. 1

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1.1.12 The ends of the workpieces must be sawn off at right angles to the longitudinal axis. Deviations from the rectangularity of the ends are allowed no more than 5%, respectively, of the thickness or width.

1.1.13 The content of cesium-137 in workpieces should not exceed the level specified in GN 2.6.1.10-1-01.

1.1.14 In terms of the quality of wood, the workpieces must comply with the requirements specified in Table 1.

**Table 1**

Name of wood defects	Norm of limitation of defects and processing defects for workpieces for varieties	
	Grade A	Grade B
1 Knots: 1.1 Partially accrete and non-accrete: -faced, rib -edge	Allowed in quantity on any one-meter section of the workpiece length on each side, pcs. No more than 4	
1.2 Rotten	Allowed in the total number of partially accrete and non-accrete no more than half of their number	Allowed
2 Cracks: 2.1 Seam and edge, incl. extending to the end	Allowed in length in fractions of the length of the workpiece no more than 1/2	Allowed provided that the integrity of the workpiece is preserved
2.2 Seam through, incl. extending to the end	Allowed total length in fractions of the length of the workpiece Not more than 1/2	Not more than 1/4
2.3 End	Allowed at one end with a length in fractions of the width of the workpiece no more than 1/2	Allowed provided that the integrity of the workpiece is preserved
3 Fungal lesions: 3.1 Browning and decay 3.2 Color and mold	Allowed total area no more than 20%	Allowed
3.3 Rot	Not allowed	Only solid heart rot with a total area of no more than 10% is allowed
4 Biological damage (wormhole)	Not allowed	Allowed on any one-meter section of the workpiece length no more than 3 pcs.
5 Obzol: 5.1 In workpieces up to 40 mm thick	Allowed width on the face from each edge and on the edges 5 mm	10 mm
	Allowed length on edges, from length up to 50%	up to 100%
5.2 In workpieces with a thickness of 40 mm and more	Allowed width on the face from each edge and on the edges 10 mm	20 mm
	Allowed length on edges, from length up to 50%	up to 100%
6 Warpness: 6.1 Longitudinal along the plate and edge	Allowed up to 15 mm in length on a two-meter section of the workpiece	Allowed
6.2 Transverse	Allowed up to 5 mm across the width of the workpiece	Allowed
Notes 1 Knots with a diameter less than 10mm are not included. 2 When the moisture content of the wood is more than 22%, the dimensions of the permissible cracks are halved. 3 Bark is not allowed during wane. 4 Wood flaws not listed in table 1 are allowed		

## 1.2 Packaging and labeling

1.2.1 Billets must be sorted by size, species (groups of species) of wood, moisture content and grades and packed in bags in accordance with GOST 19041.

1.1.2 Each package of blanks must have a label on which the following details are indicated:

- name of the manufacturer with indication of the legal address and country;
- product designation;
- nominal dimensions (thickness, width, length);
- species (group of species) of wood;
- humidity;
- grade;
- the number of blanks, pcs;
- package volume, m<sup>3</sup>;
- other information provided for in the agreement (contract).

1.1.3 Marking of packages in accordance with STB 2427.

1.1.4 Transport marking in accordance with GOST. 14192.

## 2 Safety requirements

2.1 Manufacturing of blanks must be carried out in accordance with [1], technological instructions and provisions containing labor safety requirements in the performance of work of a particular type.

2.1 The production process for the manufacture of blanks, transportation, storage of raw materials and finished products, technological equipment and tools must comply with the requirements of GOST 12.3.020, GOST 12.3.042.

2.2 The required air cleanliness in industrial premises should be ensured by general ventilation, and at workplaces - by the use of aspiration systems that exclude the entry of wood dust into the air. The maximum permissible concentration (hereinafter - MPC) of wood dust in the air of the working area of industrial premises should not exceed the hygienic standards established by GOST 12.1.005 and in [2]. MPC for wood dust in the air of the working area - 6 mg / m<sup>3</sup>.

2.3 The value of the maximum one-time MAC of wood dust in the atmospheric air is 400 µg / m<sup>3</sup> according to [3].

2.4 The frequency of control over the content of harmful substances in the air of the working area must comply with GOST 12.1.005 and [2].

2.5 Control of the main control panel of harmful substances in the air of the working area is carried out in accordance with [4].

2.6 Premises of sawmills and woodworking industries must be equipped with supply and exhaust ventilation in accordance with GOST 12.4.021 and GOST 3254S.

2.7 Logging work carried out in the zones of radioactive contamination should be carried out according to [5].

2.8 Organizational and technical measures to ensure fire safety must comply with the requirements of GOST 12.1.004.

2.9 Loading and unloading operations must be carried out in accordance with the requirements of GOST 12.3.009.

2.10 Workers engaged in the production of blanks must undergo a medical examination upon acceptance for work and periodically during work within the timeframes established in [6].

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2.11 Measurement of the noise level at workplaces should be carried out in accordance with GOST 12.1.050.

2.12 In production facilities, at workplaces, in working areas, the noise level should not exceed the level provided for in SanPiN No. 115.

2.13 The operation of production equipment and the main parameters of the technological process must comply with the requirements of technological modes, approved in the prescribed manner.

2.14 When placing the equipment, ensure the safety and convenience of its maintenance, as well as the possibility of safe evacuation of people in an emergency and fire.

2.15 The amount of raw materials and finished products in production and storage facilities should not exceed the permissible standards in accordance with fire safety requirements.

### **3 Acceptance rules**

3.1 Blanks must be accepted by the persons responsible for quality control of the manufacturer's products based on the results of checking for compliance with the requirements of these specifications.

3.2 Workpieces are presented for acceptance in batches consisting of workpieces of one species.

3.3 Each batch is accompanied by a quality document, which must indicate:

- name of the manufacturer with indication of the legal address and country;
- product designation;
- nominal dimensions (thickness, width, length);
- species (group of species) of wood;
- humidity;
- grade;
- the number of blanks, pcs;
- package volume, m<sup>3</sup>;
- date of manufacture (day, month, year);
- other information provided for in the agreement (contract).
- signature (stamp) of the person responsible for acceptance.

3.4 Workpieces are accepted according to the results of acceptance tests in terms of quality indicators: 1.1.1-1.1.8,1.1.11-11.14,1.2.

3.5 Control of individual batches of blanks is carried out using statistical methods according to STB GOST R 50779.72 according to A.

3.6 When inspecting individual lots, the acceptance number ( $A_c$ ) and sample size ( $n$ ) are selected based on the quality limit for individual lots (marginal quality) LQ - 12.5% for the first inspection and LQ = 8% for re-inspection.

By agreement of the manufacturer of blanks with the consumer, it is allowed to carry out a higher level of control (LQ less than 8%), while the additional costs for sampling control must be borne by the consumer, and the level of control is specified in the agreement (contract).

The value of the acceptance number ( $A_c$ ) and the sample size ( $n$ ) for the limiting quality LQ = 12.5% and LQ = 8% are shown in Table 2.

Table 2

In pieces

Volume	Ultimate quality LQ = 8 %		Ultimate quality LQ = 12.5 %	
	Volume Samples (n)	Acceptance Number (Ac)	Volume sampling (n)	Acceptance number (Ac)
From 16 to 25 incl.	17 <sup>1</sup>	0	13	0
26-50	22	0	15	0
51-90	24	0	16	0
91-150	26	0	18	0
151-280	28	0	20	0
281-500	32	0	32	1
501-1200	50	1	32	1
1201-3200	80	3	50	3
3201-10000	125	5	80	5
10001-35000	200	10	125	10
35001-150000	315	18	200	18

## Notes

- 1 When the sample volume (n) exceeds the lot size, a blanket inspection is carried out.  
 2 With a batch volume of more than 150,000 pieces of blanks, control is carried out according to the last indicators of the table.

## 3.7 Radiation monitoring of workpieces is carried out if:

- the blanks were obtained from timber harvested in the zones of radioactive contamination;
- the requirements for radiation monitoring are specified in the agreement (contract).

## 3.8 Acceptance control is carried out in the following order:

- product units are randomly selected from a batch of blanks;
- check each workpiece in the sample for compliance with the requirements of these specifications and determine the number of nonconforming product units;
- if the number of nonconforming pieces of workpieces identified in the sample does not exceed the acceptance number Ac specified in table 2, the batch must be accepted;
- if the number of nonconforming pieces of workpieces identified in the sample exceeds the acceptance number Ac specified in Table 2, the batch is rejected;
- the rejected batch of blanks is re-inspected after all nonconforming units of production are withdrawn and replaced with the appropriate ones;
- the rejected batch of blanks is re-checked according to the parameters that led to its rejection during the first inspection.

## 4 Control methods

4.1 The species of wood is determined visually.

4.2 Sizing of workpieces is carried out in accordance with STB EN 1309-1.

4.3 The volume of blanks is determined according to STB EN 1312.

4.4 The moisture content of wood is determined according to GOST 16588.

4.5 Determination of surface roughness parameters - according to GOST 15612.

4.6 Wood defects and processing defects according to STB EN 1310, STB EN 1311.

4.7 The packaging and markings are checked visually.

4.8 The method and means of packaging are checked visually.

4.9 Radiation control of blanks is carried out by accredited radiation control subdivisions in accordance with the procedures

approved in the prescribed manner.  
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## **5 Transport and storage**

5.1 Workpieces are transported by all modes of transport in accordance with the modes of carriage of goods operating in this mode of transport.

5.2 Workpieces must be transported in packaged form. The dimensions of the transport packages are in accordance with GOST 16369.

5.3 During transportation, workpieces must be protected from mechanical damage, precipitation and pollution.

5.4 Workpieces should be stored in warehouses or in open sheltered warehouses, stacked separately by size, grade and type of wood. Storage conditions should exclude the impact of ground and other waters.

## **6 Manufacturer's Warranties**

6.1 The manufacturer guarantees the compliance of the workpieces with the requirements of these technical specifications, subject to the conditions of transportation and storage.

**Annex A**  
(reference)

**List of Technical Normative Legal Acts, which are referenced in these technical specifications**

STB EN 844-3-2008	Round timber and sawn timber. Terminology. Part 3. General terms for sawn timber
STB EN 1309-1-2010	Round timber and sawn timber. Dimension measurement methods. Part 1. Sawn timber
STB EN 1310-2012	Round timber and sawn timber. Determination of the volume of a batch of sawn timber
STB EN 1311-2011	Round timber and sawn timber. Methods for measuring biological damage
STB EN 1312-2010	Round timber and sawn timber. Determination of the volume of a batch of sawn timber
STB 1711-2007	Round timber of coniferous species. Technical conditions
STB 2316-1-2013	Round coniferous timber. Sorted by quality. Part 1. Spruce and fir
STB 2427-2015	Lumber. Acceptance rules, control methods, sorting, marking and transportation
STB GOST R 50779.72-2001	Statistical methods. Sampling procedures on an alternative basis. Part 2. Plans for the sampling of individual lots based on the limiting quality LQ
GOST 12.1.004-91	Occupational safety standards system. Fire safety. General requirements
GOST 12.1.005-88	Occupational safety standards system. General sanitary and hygienic requirements for the air of the working area
GOST 12.1.050-86	Occupational safety standards system. Methods for measuring noise in the workplace
GOST 12.3.009-76	Occupational safety standards system. Loading and unloading works. General safety requirements
GOST 12.3.020-80	Occupational safety standards system. Processes of moving goods at enterprises. General safety requirements
GOST 12.3.042-88	Occupational safety standards system. Woodworking production. General safety requirements
GOST 12.4.021-75	Occupational safety standards system. Ventilation systems. General requirements
GOST 6782.1-75	Sawn products from coniferous wood. Shrinkage value
GOST 7016-2013	Products from wood and wood-based materials. Roughness parameters
GOST 10950-2013	Softwood lumber. Antiseptic treatment by application to the surface
GOST 14192-96	Marking of goods
GOST 15612-2013	Products from wood and wood materials. Methods for determining the parameters of surface roughness
GOST 16369-96	Packages for transport timber. Dimensions
GOST 16588-91	Sawn products and wooden parts. Moisture determination methods
GOST 19041-85	Transport packages and block packages of sawn timber. Packaging, labeling, transportation and storage
GOST 32548-2013	Ventilation of buildings. Air distribution devices. General specifications
SanPiN of 16.11.2011 No. 115	Sanitary norms, rules and hygienic standards of the Republic of Belarus "Noise at workplaces, in vehicles, in the premises of residential, public buildings and on the territory of residential development"
GN 2.6.1.10-1-01-2001	Republican permissible levels of cesium-137 in wood, products from wood and wood materials and other non-food products of forestry (RDU / LH-2001)