

Rough lumber of coniferous species.
Interpretation of Russian export grading rules in accordance to GOST 26002-83

1. Dimensions:

1.1 Sawn lumber is subdivided:

By thickness:	Thin	16 - 22 mm
	Medium	25 - 44 mm
	Thick	50 - 100 mm
By width:	Narrow	75 - 125 mm
	Wide	150 mm and wider
By length:	Short	450 - 2400 mm
	Long	2700 - 6300 mm

1.2. Nominal thickness and width are guided by standard GOST 24454-80, where thickness of the lumber shall not exceed 100 mm.

1.3. Lengths of lumber are ranged:

from 1500 mm and up with a step of 300 mm;

from 450 mm up to 1350 mm with a step of 150 mm;

Lumber with length from 450 mm up to 1350 mm is manufactured by an order of State foreign trade organization.

1.4. Nominal dimensions of lumber are established for the wood of MC (moisture content) 20%. With MC of more or less than 20%, actual thickness and width of lumber shall be more or less than nominal dimensions in correlation with shrinkage value according to standard GOST 6782.1-75.

1.5. Limiting deviations from nominal dimensions of lumber shall not exceed in mm:

By length	+ 25	- 12
By width	+ 3	- 2
By thickness:		
thickness less than 50 mm	+ 2	- 1
thickness 50 mm und up	+ 3	- 2

Volume of lumber with maximum admitted deviations shall not exceed 25% of total volume of lumber.

2. Technical Requirements

2.1. Lumber shall be manufactured in accordance to the requirements of the present technology standard for the wood of Pine, Spruce, Fir and Larch species.

2.2. Lumber is subdivided by quality of the wood and by its machining into 1, 2, 3, 4 and 5 grades.

2.3. Lumber is arranged:

By dimensions;

By species;
By grades:

U/S Unsorted (combining 1, 2, 3 grades together, the percentage correlation of which shall correspond to the natural recovery of lumber while sawing);

4 grade separately;

5 grade separately;

Up to 15% of Fir is admitted in a load of Spruce lumber.

2.4. MC moisture content of lumber shall not exceed 22%. Variation of the moisture content is admitted by custom orders.

2.5. Antiseptic treatment of lumber is per standard GOST 10950-78.

2.6. Quality of the wood and manufacture of lumber shall correspond to the requirements specified in tables 1-3.

Pine and Larch Lumber

Table 1

Wood defects	Limiting norms of wood defects by grades																			
	1 grade		2 grade		3 grade		4 grade		5 grade											
	size	number	size	number	size	number	size	number	size	number										
1. Knots	Admitted on outside face in dimensions in mm and number in pieces on average per 1000 mm of length of lumber.																			
1.1. Intergrown knots																				
1.1.1. Round and Oval																				
1.1.1.1. Face																				
In thick wide sawn lumber																				
13-17											1	18-27	1	28-38	2	Admitted				
														over 38 up to 50	1					
In thick narrow lumber																				
10-14											1	15-24	1	25	2	Admitted				
														over 25 up to 38	2					
In medium wide lumber																				
10-14											1	15-18	1	19-25	3	Admitted				
														over 25 up to 38	1					
In medium narrow lumber																				
10-14											1	15-18	1	19-25	3	Admitted				
				over 25 up to 32	1															
In thin lumber																				
10-14	1	15-18	1	19-22	2	Admitted														
				over 22 up to 32	1															
In lumber of 75 mm wide knots shall not exceed:																				
	1/4		1/3		1/2		2/3		Admitted											
of face width																				
Number of knots on the inside face of lumber of 1 & 2 grades is admitted twice more and in 3 grade one and a half times more than for outside face.																				
1.1.1.2. Edge & corner	Admitted on each edge with dimensions in mm and number in pieces for entire length of a piece:																			

	In thick lumber:										
up to 6	3-4	7-12	3-5	13-16	5-8	Admitted					
		13-19	3-5	over 16 up to 25							3-5
				over 25 up to 32							3
In medium lumber:											
up to 6	2-3	7-12	2-4	13-16	2-4	Admitted					
		13-19	2-3	over 16 up to 3/4 of thickness							2-4
In thin lumber:											
up to 6	1-2	7-10	1-2	up to 2/3 of thickness	2	Admitted					
1.1.1.3. End	Admitted on each end with dimensions in mm and number in pieces:										
	Not admitted			25	1	Admitted					
1.1.2. Spike, branchy including appeared on corners, and edge	Admitted on the inside face of sawn timber (lumber) in total number of intergrown round and oval knots with dimensions and amount as per paragraphs 1.1.1.1.; 1.1.1.2.										
	Dimension of knots in mm by maximum diameter is admitted of not more than:										
	38	50	admitted								
	Appearing of knots on edges:										
	Admitted with appearing on edge of not more than:										
	Not admitted		1/4 of the thickness		1/3 of the thickness		Admitted				
Wood defects	Limiting norms of wood defects by grades										
	1 grade		2 grade		3 grade		4 grade		5 grade		
	size	number	size	number	size	number	size	number	size	number	
1.2. Encased sound, unsound, decayed, rotten	Admitted on the outside face within the amount of intergrown sound knots with dimensions in mm and number in pieces in average per 1000 mm of the length of lumber:										
1.2.1. Face	In thick wide sawn timber lumber										
Not admitted				25	1	63	1	Admitted Knot holes shall not exceed 32 mm in narrow and 38 mm in wide sawn timber (lumber)			
				Through the board unsound, decayed and rotten							
				Not admitted		25	1				
In thick narrow lumber											
Not admitted				19	1	50	1	Admitted Knot holes shall not exceed 32 mm in narrow and 38 mm in wide sawn timber (lumber)			
				Through the board unsound, decayed and rotten							
				Not admitted		25	1				
In medium wide lumber											
Not admitted				19	1	50	1	Admitted Knot holes shall not exceed 32 mm in narrow and 38 mm in wide sawn timber (lumber)			
				Through the board unsound, decayed and rotten							
				Not admitted		19	1				
In medium narrow lumber											
Not admitted					13	1	38	1			

		Through the board unsound, decayed and rotten								
	Not admitted	19	1							
	In thin lumber									
	Only sound									
	Not admitted	13	1	38	1					
Through the board unsound, decayed and rotten										
19				1						
	In lumber of 75 mm wide of all thickness the knot's sizes shall not exceed:									
	Not admitted	1/3	1/2	2/3						
		Of width of face								
1.2.2. Edge and corner, including knot holes	Admitted on each edge with dimensions in mm and by number in pieces on the entire length of lumber.									
	In thick lumber									
	Not admitted	13	1-2	38	2-4	Admitted				
	In medium lumber									
	Sound only									
	Not admitted	10	1-2	32	2-4	Admitted				
	In thin lumber									
	Sound only									
	Not admitted	6	1-2	25	2-4	Admitted				
	Knot holes not more than:									
		Admitted with depth not more than:			Admitted					
	Not admitted	In thick - 1/4	thickness of lumber with showing on outside face not more than 2,0 mm	Admitted						
		In medium - 1/3								
		In thin - 1/2								
		Of thickness of lumber								
	Limiting norms of wood defects by grades									
Wood defects	1 grade		2 grade		3 grade		4 grade		5 grade	
	size	number	size	number	size	number	size	number	size	number
1.2.3. End	Not admitted					Admitted				
2. Checks										
2.1. Side checks										
2.1.1. Face checks										
2.1.1.1. Non through	Admitted with extent of not more than:					Admitted by conditions of integrity of lumber				
	1/3	1/2	2/3							
	Of the length of lumber									
	Without appearing on ends and edges		With appearing on one end up to 1/3 of thickness without exiting from end to edge.							
2.1.1.2. Through										
2.1.1.2.1. Through without appearing on the end, including ring shakes	Not admitted	Admitted without exiting on edges from outside and inside faces with length of not more than:			Admitted by conditions of integrity of lumber					

Note:			In thick lumber								
			1/5 (1/2)		1/3 (2/3)						
			Of the length of a piece								
			In medium lumber								
			1/10 (1/4)		1/5 (1/3)						
			Of the length of lumber								
		In thin lumber									
		Not admitted									
		Check sizes, shown without brackets, relate to outside face; those in brackets relate to inside face.									
2.1.1.2.2. Through appearing on end		Admitted with extension from each end of not more than, mm:									
		30		40		50		Width of lumber		600	
2.1.2. Edge checks		Admitted:									
		Shallow, length not more than 40 mm				Not crossing corners of edge		Admitted			
Wood defects		Limiting norms of wood defects by grades									
		1 grade		2 grade		3 grade		4 grade		5 grade	
		size	number	size	number	size	number	size	number	size	number
2.2. End checks											
2.2.1. Heart checks		Heart checks				Admitted in thick lumber on one end with length extent not more than 1/2 of width of a piece		Admitted			
2.2.2. Ring shakes		Not admitted				Admitted with diameter of not more than, mm: In lumber with width 25 to 44mm – 10 45 to 63mm – 19 above 63mm – 25		Admitted by conditions of integrity of lumber			
3. Defects of wood structure											
3.1. Slope of grain		Admitted, if grain deviation from straight direction per 300 mm of length of lumber compose not more than, mm:						Admitted			
		10		19		25					
3.2. Compression wood		Admitted without splits on ends						Admitted			
3.3. Pitch pockets		On faces									
		In thick lumber									
		Admitted non through with width not more than, mm:									
		3		3		6					
		With length up to, mm:									
		75		100		200					
		On each face in amount in pieces of not more than:									
		2-3		4-6		8		Admitted			
		In medium and thin lumber									
		Admitted non through with width not more than, mm:									
		3		3		6					
		With length up to, mm:									
		25		75		125					
		On each face in amount in pieces of not more than:									

Note:	2-3	3-4	5							
	Without appearing on edges and ends				-					
	Indicated amount of pitch pockets is admitted in less numbers on outside face and more numbers on inside face.									
	On edges							Admitted		
	Not admitted		1/2 of norm for outside face		Width up to 3 mm; length up to 100 mm in amount up to 4 pieces on each edge					
On ends										
Not admitted				Admitted in medium and thin lumber with width up to 3 mm and length up to 1/3 of width of lumber						
Wood defects	Limiting norms of wood defects by grades									
	1 grade		2 grade		3 grade		4 grade		5 grade	
	size	number	size	number	size	number	size	number	size	number
3.4. Pith	Admitted in lumber of over 25 mm thick (without ring shakes and checks)									
	With extent up to 1/2 of length of lumber appearing on one end at distance not more than 1/6 of thickness of timber from inside face.		With extent of total length of lumber appearing on one end at distance not more than 1/4 of thickness from inside face.		Admitted		Admitted			
	Admitted in lumber of 25 mm thick and thinner									
	Not admitted				Admitted attached to inside face with appearing on outside face.			Admitted		
Note:	In a load of lumber of 3 grade not more than 30% of boxed heart is admitted									
3.5. In bark (Bark pockets)	Not admitted				Admitted on faces non through not more than 25 mm wide in amount of 1 piece up to 75 mm long and up to 3 pieces with length up to 50 mm;		Admitted up to 50 mm wide; In thick lumber on one face with no limit length. In medium and thin lumber up to 175 mm long.		Admitted	
3.6. Pitch & Pitch Streaks	Not admitted		Admitted on faces and edges in form of spots and streaks				Admitted			
4. Fungal defects										

4.1. Fungal heartwood stains (streaks)	Not admitted		Admitted in thick lumber on face or edge without appearing on ends up to 1/5 of width and length of a piece. Not admitted in medium and thin lumber	Admitted on faces and edges up to 1/2 of width and length of lumber, admitted showing on end with covering of not more than 10% of end's area.	Admitted					
4.2. Light fungal sap stains and mold										
4.2.1. Surface	Not admitted		Admitted on faces and edges up to 2 mm deep in shape of spots and streaks with total area of covering of not more than 15% of area of one face.	Admitted on faces and edges in shape of spots and steaks.	Admitted					
4.2.2. Deep	Not admitted		Admitted on faces and edges up to 2 mm deep in shape of spots and streaks with total area of covering of not more than 5% of area of one face.	Admitted on faces and edges up to 2 mm deep in shape of spots and streaks with total area of covering of not more than 50% of area of one face and edges. With covering of not more than 10% of end area.	Admitted					
Note:	Volume of lumber with maximum admitted norm of deep fungal sap stains in a batch of 4 grade shall not exceed 25%.									
Wood defects	Limiting norms of wood defects by grades									
	1 grade		2 grade		3 grade		4 grade		5 grade	
	size	number	size	number	size	number	size	number	size	number
4.3. Decay										
4.3.1. Sap Decay										
4.3.1.1. Firm	Not admitted		In thick lumber is admitted on face or edge up to 1/5 of width and length without appearing on ends. Not admitted in medium and thin lumber	Admitted on faces and edges up to 1/2 of width and length of lumber without appearing on end.	Admitted					
4.3.1.2. Soft	Not admitted									

4.3.2. Heart Decay	Not admitted	Brown checked not admitted. Firm mottle honeycomb is admitted appearing on all sides in shape of streaks covering not more than 50% area of one face. Decay shall not cover more than 20% of and area.
4.3.3. External rot	Not admitted	
5. Insect damages		
5.1. Wormholes	Not admitted	External is admitted, caused by bark beetles

Table 2

Wood defects	Limiting norms of wood defects by grades									
	1 grade		2 grade		3 grade		4 grade		5 grade	
	size	number	size	number	size	number	size	number	size	number
1. Manufacturing defects										
1.1. Wane										
1.1.1. Obtuse	Admitted on one edge with extension of not more than:						Admitted on both edges extended not more than 2/3 of the length of lumber		Admitted on both edges extended on entire length with covering of not more than 2/3 of thickness and width of lumber	
	1/5		1/4		1/3	Of the length of the lumber				
	On both edges:									
	1/10		1/5		1/4	Of the length of the lumber				
	Width of wane, calculated by maximum value of miss sawn part in mm, is admitted of not more than:									
	In lumber with thickness up to 25 mm:									
	1/4		1/3		1/2	2/3				
	Of thickness of lumber									
	In lumber with thickness over 25 mm:									
	1/5		1/4		1/3	2/3				
	Of thickness of lumber									
							Wane admitted on condition that sawn part of edge shall be not less than 1/2 of thickness of lumber			
1.1.2. Sharp	Not admitted						Admitted on one edge not more than 1/10 of length of lumber provided that nominal width of			

		inside face shall be maintained										
Note:	The wane shall be free of bark and inner bark, in lumber of 5 grade inner bark may be present											
1.2. Saw marks	The depth of saw teeth marks shall not exceed 0,75 mm											
1.3. Fringe	Not admitted											
1.4. Bevel cut	Declinations from perpendicularity of end to face and to edge are admitted up to 3% of width and thickness of lumber correspondently.											
1.5. Chipping	Chipping due to mechanical damages, saw kerfs, knife marks caused by debarking machines on edge corners next to inside face are not admitted; on edge corners next to outside face are admitted correspondently to wane limitations.											
1.6. Waving	The height of wave shall not exceed 0,75 mm											
1.7. Torn grain	On faces											
	Admitted not more than 0,75 mm deep without number limitations					Admitted up to 3 mm deep without number limitations					Admitted	
	On edges											
	Admitted not more than 3 mm deep without number limitations					Admitted not more than 5 mm deep without number limitations					Admitted	
Note:	Limits for waving and torn grain are indicated only for lumber recovered on "chip and saw" equipment											
1.8. Foreign particles (nails, wire, metal debris and etc.)	Not admitted											
Wood defects	Limiting norms of wood defects by grades											
	1 grade		2 grade		3 grade		4 grade		5 grade			
	size	number	size	number	size	number	size	number	size	number		
2. Warping	Admitted with deflection of not more than, %											
2.1. Crook	0,10		0,10		0,15		0,20		admitted			
	Of the length of lumber											
Note:	1. Volume of lumber with admitted crook warp shall not exceed 20% of the total volume of the said grade. 2. Values for crook warp for lumber of different length are given in reference Annex											
2.2. Bow	Admitted with deflection per each 1500 mm of the length of lumber of not more than, mm:										Admitted	
	2		4		6		13					
2.3. Cup	Admitted with deflection of not more than, mm:										Admitted	
	For wide lumber											
	3		3		6		10					
	For narrow lumber											
	1		1		3		6					
2.4. Twist	Admitted with deflection from sawing plain not more than 13 mm for entire length of lumber										Admitted	
Note:	Volume of lumber with crook, bow and twist, provided p. 2.2-2.4 shall not exceed in U/S grade - 10%, in 4 grade – 20% of total volume.											

3. Acceptance Rules and Methods of Control

3.1. Acceptance rules and methods of control – as per GOST 6564-84

3.2. Sizes of knots are determined by the smallest diameter. Measurement of spike, branchy including appeared on

corners and edge knots shall be taken on corner of lumber. Their size to be accepted as per the norms of admitted knots on edges. Their depth of covering of edge shall be measured by the distance between corner and tangent placed parallel to the corner.

Values of crook warping for lumber by length and grades:

Length of lumber in mm	Crook warping by grades			
	Unsorted (U/S)		4 grade	
	%	mm	%	mm
1500	0,15	2,2	0,2	3,0
1800	0,15	2,7	0,2	3,6
2100	0,15	3,2	0,2	4,2
2400	0,15	3,6	0,2	4,8
2700	0,15	4,0	0,2	5,4
3000	0,15	4,5	0,2	6,0
3300	0,15	5,0	0,2	6,6
3600	0,15	5,4	0,2	7,2
3900	0,15	5,8	0,2	7,8
4200	0,15	6,3	0,2	8,4
4500	0,15	6,8	0,2	9,0
4800	0,15	7,2	0,2	9,6
5100	0,15	7,6	0,2	10,2
5400	0,15	8,1	0,2	10,8
5700	0,15	8,6	0,2	11,4
6000	0,15	9,0	0,2	12,0
6300	0,15	9,4	0,2	12,6
6600	0,15	9,9	0,2	13,2
6900	0,15	10,4	0,2	13,8
7200	0,15	10,8	0,2	14,4
7500	0,15	11,2	0,2	15,0