

DECLARATION OF PERFORMANCE
No. Bratsk Nordic NOV 2016

1. Unique identification code of the product-type:
12-15-18-21 mm Bratsk Structural Softwood Plywood (density $\geq 400 \text{ kg/m}^3$)

2. Intended use:
Structural components in dry or humid conditions
Structural floor decking on joists in dry conditions
Structural roof decking on joists in dry or humid conditions

3. Manufacturer:
Ilim Timber, LLC
199178, Saint-Petersburg,
Maly Prospect, V.O., 54, building 2, liter A1
Russia

In the factory
Bratsk Branch of Ilim Timber LLC
Bratsk, BLPK Industrial site
Irkutsk region,
665718, Russia,

4. Authorized representative:
Not relevant

5. System of AVCP:
AVCP System 2+

6a. Harmonised standard:
EN 13986

6b. Notified body:
MPA Bremen has performed initial inspection of the manufacturing plant and factory production control and continuous surveillance, assessment and evaluation of factory production control under system 2+ and issued a certificate of conformity of the factory production control (1075-CPR-Z420-7/15).

7. Declared performance


Essential characteristics	Declared performance	Reference
Bonding quality	Class 3	EN 314-2
Release of formaldehyde	E1	EN 717-2
Reaction to fire	D-s2,d0, D _n -s1	Table 8
Water vapour permeability	Wet cup μ : 60 Dry cup μ : 180	Table 9
Airborne sound insulation	NPD	
Sound absorption	Sound absorption coefficient: 0,10 (250 to 500 Hz) / 0,30 (1000 to 2000 Hz)	Table 10
Thermal conductivity	0,11 W/mK	Table 11
Embedment strength	NPD	
Air permability	NPD	
Strength and stiffness for structural use	See attached technical datasheet	EN 789
Impact resistance for structural use af floor and roof decking	See attached technical datasheet	EN 1195 / EN 12871
Strength and stiffness under point load for structural use as floor and roof decking	See attached technical datasheet	EN 1195 / EN 12871
Mechanical durability	K_{mod} and k_{der} is to be taken from EN 1995-1-1	
Biological durability	Use class 1 and 2	CEN/TS 1099:2007 /EN 335
Content of pentachlorophenol	< 5 ppm	

EN 13986:2004

The performance of the product identified above is in conformity with the set of declared performance. This declaration of performance is issued, in accordance with Regulation (EU) No 305/2011, under the sole responsibility of the manufacturer identified above.

Signed for and behalf of the manufacturer by:

Quality Control Department Manager



Shabalkova N.A.

Russia, Irkutsk region, Bratsk
November 11th, 2016

EN 1058/EN789 Characteristic Strength, Stiffness and Density Values for Structural Design

BRATSK SOFTWOOD PLYWOOD



EN 13986, EN 636-2 S, E1, D-s2, d0
 EN 13986, Flooring, EN 636-2 S, E1, D_{fl}-s1, d0
 EN 13986, Roofing, EN 636-2 S, E1, D-s2, d0

EN 635-3 veneer grade I, II and III in combination, sanded or unsanded

EN 1058/EN 789 Characteristic density (kg/m ³) and strength (N/mm ²) values. <i>Note 3</i>										
Thickness (nominal), mm	Number of veneers/ layers	Density, kg/m ³ <i>Note 1</i>	Bending		Tension		Compression		Shear	
			f _m		f _t		f _c (=f _t)		Panel shear	Planar shear
t _{nom}		ρ	0	90	0	90	0	90	f _v	f _r
12	5/5	400	20	15	10	6	10	6	3,5	0,6
15	7/7	400	25	15	12,5	6	12,5	6	3,5	0,6
18/19	9/9	400	25	15	12,5	6	12,5	6	3,5	0,6
21	11/11	400	30	20	15	8	15	8	3,5	0,6

EN 1058/EN 789 Mean stiffness values (N/mm ²). <i>Note 2 & 3</i>							
Thickness (nominal), mm	Bending		Tension		Compression		Panel shear modulus
t _{nom}	E _m		E _t		E _c (=E _t)		G _p
	0	90	0	90	0	90	
12	6000	3000	4800	2400	4800	2400	310
15	6000	3000	4800	2400	4800	2400	310
18/19	6000	3000	4800	2400	4800	2400	310
21 (11/11)	6000	3500	4800	2800	4800	2800	310

EN 12871 Characteristic Strength and Stiffness values for Roof & Floor panels

EN 12871 Characteristic Strength and Stiffness values for Roof & Floor panels									
Thickness (nominal), mm	Number of veneers/layers	Minimum distance between supports (span), mm <i>Note 6</i>	Point load		Resistance To Soft Body Impact Load	Calculation			Category <i>Note 5</i>
			Characteristic Strength			Mean stiffness	Factor / Partial coefficient		
			Service $F_{ser,k}$ H	Maximum $F_{ult,k}$ H		R_m , H/MM <i>Note 7</i>	Class	Minimum k_{mod}/γ_m <i>Note 4</i>	
Floor									
15	7/7	405	2871	4008	536	In accordance with requirements	1	0,32	A
18	9/9	610	2861	3904	411		1	0,33	A
21	9/9-11/11	610	Values for 18mm are used						
Roof									
12	5/5	610	3102	3209	159	In accordance with requirements	2	0,42	H
15	7/7	815	2462	3367	206		2	0,40	H
18	9/9	1220	3441	4160	112		2	0,32	H
21	9/9-11/11	1220	Values for 18 mm are used						

Note 1. The mean values for density should be taken as 1.15 times the characteristic values given in the table.

Note 2. The 5% characteristic values for stiffness should be taken as 0.85 times the mean values given in the table.

Note 3. When used structurally under service class 1(dry) or 2(humid) conditions, the characteristic strength and stiffness values of the mechanical properties given in the tables shall be modified with regard to duration of load (k_{mod} , k_{def}) according to national codes. The panels may only be used in exterior conditions (Service Class 3) if a treatment of proven exterior durability (coating or otherwise) has been applied to the relevant surfaces and edges.

Note 4. The loading duration k_{mod} and the partial coefficient for materials, γ_m , may differ in different EU countries. The Minimum values indicated in the table relate to the indicated load category in combination with a k_{dis} value by EN 12871.

Note 5. Category A. Application. Living flats and houses, attics, hostels, rooms and wards in hospitals, bedrooms in hotels and asylums, kitchens and WC. Category H. Roof panels, that probably will not be used for living conditions due to the design and availability.

Note 6. See a separate instruction.

Note 7. The values in the table must be multiplied by 0,93 in order to get 5% characteristic stiffness values.