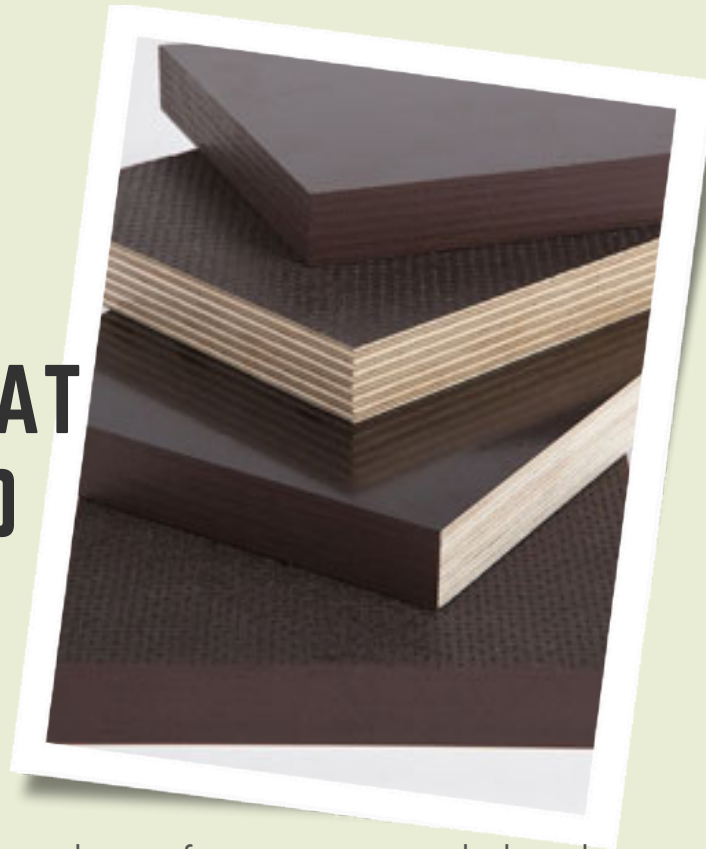




JUMBO LARGE FORMAT FILM FACE PLYWOOD

LARGE FORMAT BIRCH HARD WOOD FILM FACE PLYWOOD



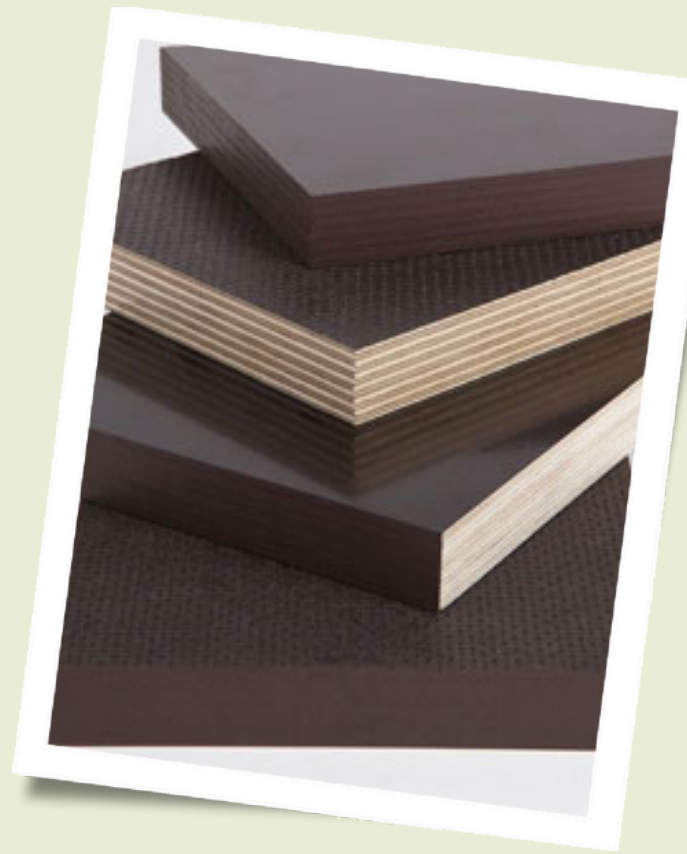
Eximcorp offers large format of High performance Birch hard wood film face Plywood in the range of user sizes such as 6000mm x 2000mm, 5000m x 2000mm or 4000mm x 2000mm in thickness 15mm to 21mm to cater to the needs of rarest of the rare application of fair finish concreting.

Birchply™ Large format of Plywood can be made in two different processes namely scarf jointing the finished Plywood or scarf jointing the each veneer sheets in a mechanised process used in the assembly of the Plywood and later hot pressing the veneers in a large format hot press of 6 meter x 2 meter under high pressure to compress the Plywood by at least 12% to 15% for consistency of adhesion between several layers of veneers. The compression of veneers leads to increase in density from 670kg/cbm to 780 kg/cbm necessary to achieve the sound bonding throughout the sheet.

Birchply™ Large format Film Face Birch Plywood having a minimum 220 GSM Phenolic film has been designed to suit any and every application needs of construction industry where durability, versatility, high bending strength, rigidity, stability, accuracy and tolerance to humidity parameters of performance value are critical. Depending on the user's option, 220 GSM film can be multiplied to achieve 440 or 660 GSM also.



KEY BENEFITS OF RUSSIAN BIRCH FILM FACE SHUTTERING PLYWOOD

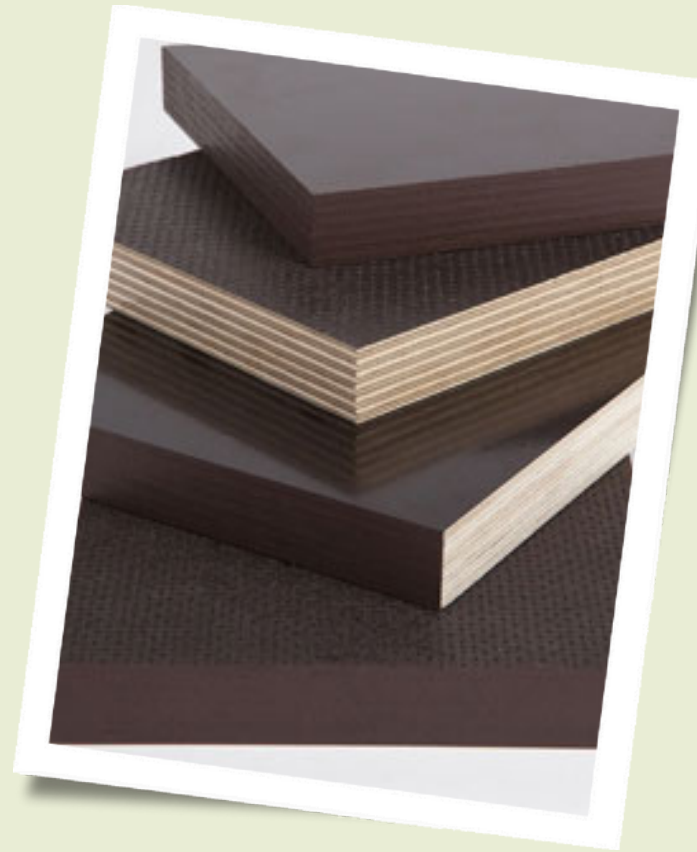


- Uniform and homogenous surface
- Waterproof, dimensionally accurate & stable.
- Strong and medium density
- 100% natural scarf jointed whole piece or spliced Birch Veneers of 1.4mm thickness throughout the plywood,
- Meets European E1 formaldehyde emission requirements (EN 120:1992) and also California ARB regulation P2
- Seamless fair finish concrete surface without any joints in the large concreted areas,
- Highly wear resistant,
- Impact resistant
- High elastic modulus and bending strength
- High flexural strength
- Resists commonly used chemicals (alkali, diluted acids, organic solvent)
- Additional surface protection in concrete block production
- Free from delamination risks,
- No need for secondary putty repairs of concreted surface and grinding
- Resistance to temperature variation: through a range of -40°C to +50°C (-40°F to +122°F), comes in a variety of thicknesses and sizes.



WHAT DOES OUR PROMISE OF EFFICIENCY MEAN TO YOU

- Products that improve your cost, material and energy efficiency
- Reliable and timely deliveries
- Local knowledge, support and service
- Solutions for every formwork application



AVAILABILITY OPTIONS:

Birchply™ Film face Birch Plywood is made in a range of thickness from 15mm to 21mm.

This large format Plywood is available with prior arrangement requiring a minimum 4 months to deliver against confirmed orders only.

TECHNICAL SPECIFICATIONS AND DECLARATION OF PERFORMANCE CONSISTENT WITH REGULATION (EU) NO. 305/2011 FOR CONSTRUCTION PRODUCTS.

Thickness, mm	15 x 11ply, 18 x 13ply, 21 x 15ply		
Tolerances			
Nominal thickness, mm	Number of plies	Tolerance on nominal thickness, mm	Thickness tolerance within one panel, max mm
15 18 21	11 13 15	+ 0.6 / - 0.8 + 0.7 / - 0.9 0.0 / - 1.1	0.6
Surface type	Smooth (F/F)		
Glue	Phenolic resin according to EN 314-2 class 3 exterior		
Film	120/220 GSM on both side of Plywood with option to double or triple the films coating in multiple of 120/220 GSM		
Water resistance	Boiling Water Proof (EN – 314-2) Class 3		
Edges protection	Coated with water borne PU or acrylic paint on all 4 sides		
Density, kg/m3	720 - 780		
Moisture content, %	5-14		
Fire Rating			
Reaction to fire	Depending on thickness and end use conditions but not less than Class D-s2, d0		EN 13986, Table 8
Thermal Conductivity	0, 17 W/mK		
Formaldehyde class	E1 EN-16516:2018		
Mechanical properties			
Flexural modulus of elasticity Em,	N/mm2	EM I - 7642 N/mm2	
		EM II-9858 N/mm2	
Characteristic flexural stiffness fm,	N/mm2	fm I - 34.3 N/mm2	
		fm I - 39.4 N/mm2	
Ultimate static bending strength, min MPa	along the grain of face veneers		60
	against the grain of face veneers		30
Static bending elasticity modulus, min MPa	along the grain		6000
	across the grain		3000
Average value of shear strength through adhesive layer (MPa)	Percentage of destruction in wood		
Above 0.2 up to 0.4 inclusively	Greater than or equal to 80		
Above 0.4 up to 0.6 inclusively	Greater than or equal to 60		
Greater than 0.6 but less than 1.0	Greater than or equal to 40		
1.0 and more	-		
Note 1 : The above properties are declared by the producer Mills in Russia and is believed to be correct and fair view of the products.			
Note 2 : The above characteristics are subject to prior agreement.			
Note 3: The above properties are consistent with Regulation (EU) No. 305/2011 for construction products.			



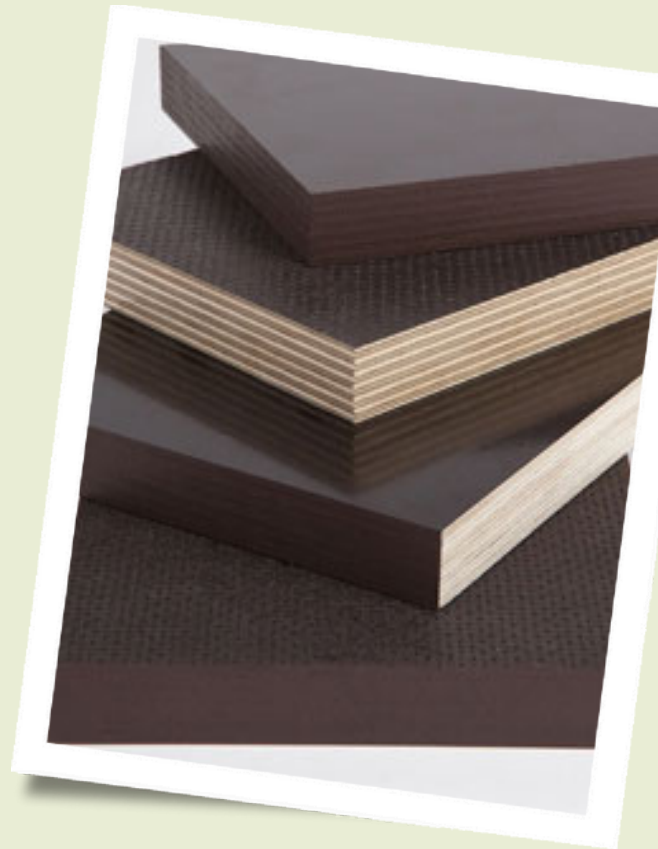
DISTINCTIVE PERFORMANCE PROPERTIES OF BIRCHPLY FILM FACE PLYWOOD

Performance characteristics	Thickness, mm	Values
Adhesion strength of coating	15 - 21	The coating peels off together with the outer veneer and the cut has sharp edges. A layer of wood fibers can be clearly seen on the underside of the cut edges
Steam resistance of film coating	15 - 21	No swelling. Slight loss of gloss. No bubbles.
Resistance of film coating to sodium hydroxide (NaOH)	15 - 21	The color of the solution is from colorless to light yellow. Slight gloss variation, the film coating is firm and resistant to mechanical stress, a mark from the bottle neck can be seen
Resistance of film coating against concrete	15 - 21	No staining of the concrete.No gloss variation, film coating is firm
Surface waviness of the film-faced birch plywood(Rippling test)	15 - 21	Average rippling length is not more than 20 mm
Film coating resistance to abrasion (Taber-test), revolutions, not less	15 - 21	300
Film coating resistance to cracking	15 - 21	Crack index not exceeding 80
Water permeability of film coating (Cobbtest), g/m ² , not more than:	15 - 21	400
<p>Note 1 : The above properties are declared by the producer Mills in Russia and is believed to be correct and fair view of the products.</p> <p>Note 2 : The above characteristics are subject to prior agreement.</p> <p>Note 3: The above properties are consistent with Regulation (EU) No. 305/2011 for construction products.</p>		



EFFECT OF HUMIDITY AND MOISTURE

- Wood veneer is a living material and is subject to moisture movement according to surrounding conditions, which affects the flatness of panels. It is important to condition the panels to reach a moisture content near to the equilibrium of their permanent environment.
- Like other wood-based panel products, Birch Plywood is also hygroscopic and its dimensions change in response to a change in humidity. A change of 1% in moisture content typically increases or decreases the length, width and thickness by 1% in dimensions and thickness. It is therefore desired that the edges are sealed with a suitable acrylic paint to prevent and/or control ingress of moisture and humidity and consequent swell in thickness and expansion in dimensions.
- The recommended stocking conditions are 20°C and a RH of air of about 60%.





STORAGE CONDITIONS:

When first exposed to the prevailing weather conditions at Site and during the early uses of the boards, there is likely to be some localised swelling of the wood veneer caused by moisture pickup, which may leave impressions in the face of the concrete. To prevent this:

- Store the panels in dry conditions, flat on a level surface, off the ground and direct sunlight, preferably indoors or under the shed.
- Panels should be store horizontally on a firm base with enough bearers to prevent sagging.
- The stacks should be covered k to protect top and edges from moisture penetration as fluctuations in temperature and humidity may cause panels to distort.

SAFE HANDLING

Film faced plywood sheets are very slippery; sliding panels may lead a whole stack to collapse. Remember, separate sheets must be moved manually by two persons. Panels must not be pulled or pushed on the floor or ground. Handling plywood requires general safety procedures and proper equipment. Handling should be kept to a minimum, and for speed and efficiency, mechanical handling devices should be used whenever possible. When taking a panel from a pack or a stack, it must be lifted, not pulled over the surface of the bottom panel, because any hard particle (sand or film particle) between panels can lead to damage of processed or coated surfaces.



PRESERVATIVES

Birchply Plywood is made from natural Birch wood Veneers grown and harvested in Russia and is free from any toxic chemicals except resin. As is common knowledge, all wood products are susceptible to insects or termites and/or borers present in different climatic zones in the soil or buildings. It is recommended that the users are applying the coat of suitable chemicals or insecticides on all exposed surfaces of wood in addition to treatment of masonry foundations of the building where the Wood products are required to be used. Fipronil emulsified concentrate at about 3% is one such chemical and effective deterrent against insects and pests or termites in tropical climate zones. However, the application should be in accordance with manufacturers guidelines for effective results. Users own discretion in selection of appropriate chemical and its doses or frequency of such treatment is advised for satisfactory results in the light of experience gained over the period of time.

REUSES

Typical number of reuses is likely to be in the range of 15-20 times. However, this will vary according to many different factors including good site practice, the required concrete finish, the amount of care taken when compacting the concrete, handling and storage of panels, type and quality of release agent used on the panels before concreting.

The number of times the plywood can be reused is only intended as an approximate guide. It does not imply any form of warranty. The actual number of reuses will depend on several factors other than the plywood.



DESIGN DATA

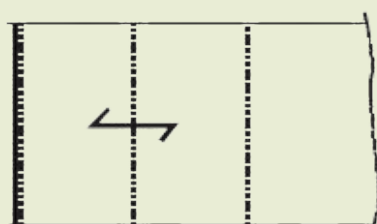
LOAD RESISTANCE q [kN/m²] AND CORRESPONDING DEFLECTION u [mm] VALUE FOR BIRCH FILM FACE PLYWOOD TO BE USED IN THE DESIGN OF CONCRETE FORMWORKS***

Load resistance for a uniformly distributed load on a continuous plate strip with three equal span lengths. Face grain parallel to span

Span c/c mm	Nominal thickness (mm)								
	15			18			21		
	q		u	q		u	q		u
100	193	s	0.2	234	s	0.2	263	s	0.2
150	129	s	0.4	156	s	0.4	176	s	0.3
200	97	s	0.8	117	s	0.7	132	s	0.6
250	77	s	1.4	94	s	1.1	105	s	0.9
300	64	s	2.2	78	s	1.8	88	s	1.4
350	55	b	3.4	67	s	2.6	75	s	2.1
400	42	b	4.2	58	b	3.7	66	s	2.9
500	27	b	6.4	37	b	5.5	49	b	4.9
600	19	b	8.9	26	b	7.7	34	b	6.8

b = bending strength limitation

s = planar shear strength limitation



Short-term loading Service Class 3

$$k_{\text{mod}} = 0.70$$

$$k_{\text{def}} = 0.40$$

$$\gamma_q = 1.2$$

$$\gamma_m = 1.3$$

q given in kN/m²

u given in mm



grain direction of surface veneers

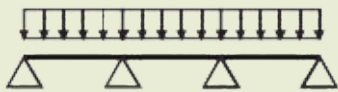
*** Obtained from Handbook of Finnish Plywood covering Birch Plywood FFP (Page 54)

Load resistance for a uniformly distributed load on a continuous plate strip with three equal span lengths. Face grain perpendicular to span

Span c/c mm	Nominal thickness (mm)								
	15			18			21		
	q		u	q		u	q		u
100	176	s	0.2	205	s	0.2	245	s	0.2
150	118	s	0.5	137	s	0.4	163	s	0.4
200	88	s	1.0	103	s	0.8	123	s	0.6
250	71	s	2.4	98	s	1.3	98	s	1.0
300	59	s	2.8	68	s	2.0	82	s	1.6
350	45	b	3.8	59	s	3.0	70	s	2.4
400	35	b	4.9	49	b	4.2	61	s	3.4
500	22	b	9.2	32	b	6.2	43	b	5.4
600	15	b	13.1	22	b	8.7	30	b	7.5

b = bending strength limitation

s = planar shear strength limitation



Short-term loading Service Class 3

$$k_{\text{mod}} = 0.70$$

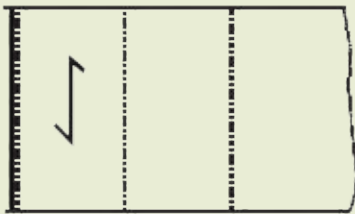
$$k_{\text{def}} = 0.40$$

$$\gamma_q = 1.2$$

$$\gamma_m = 1.3$$

q given in kN/m^2

u given in mm



grain direction of surface veneers

*** Obtained from Handbook of Finnish Plywood covering Birch Plywood FFP (Page 54)

DISCLAIMER:

Eximcorp India Pvt Ltd, does not assume any responsibility or admits any liability whatsoever for the number of uses or re-uses or repetitions or damages to the sheets or concrete surface quality for reasons not attributable to manufacturing defects or for several other factors affecting the performance of the product. In the event of any occasional delamination in excess of the AQL (Acceptance Quality Level) of 3% established by the trade practices and also so declared by the seller hereby, the replacement of delaminated sheets or the surface area so observed shall be made expeditiously by the Seller or refund of value thereof as soon as possible without any further or other consequential or other losses.



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