

SHIP PLY



Birch plywood with superior mechanical properties. Internal layers of veneer are of highest quality, produced especially for sea containers designed for liquified gas transportation. Plywood is glued using special water-resistant phenol-formaldehyde glue. Production procedure and product quality are in accordance with requirements set by Gaztransport & Technigaz (GTT), are continuously monitored by one of Certification Institutions - Bureau Veritas, Det Norske Veritas, American Bureau of Shipping or Lloyd's Register.

Riga Ship Ply – the only plywood certified to be used in MIII, NO96 and CS1 systems.



Birch plywood is composed of 1,4 mm thick veneers by cross bonding.

Grades

Grades of plywood are defined according to company's technical specifications developed in accordance with GTT, as well as on the basis of International Organization for Standardization Technical Committee 139 Working Group 2 quality requirements, recommendations and regulations on plywood with outer plies made of peeled birch veneers (1994).

Further processing

Cut to size panels and machining available in accordance with the customers' requirements.

Advantage

Environmentally friendly, durable, easy workable.

Formaldehyde emission

In accordance with the standard EN 13986 formaldehyde emission meets the Class E1 requirements. Test method EN 717 Part 2.

Plywood bonded with a phenol-formaldehyde resins meets the CARB Phase 2 and Japanese 4-Star Regulation's requirements.

Gluing classes

Birch plywood is bonded with a special phenol resin adhesive which is weather and boil-proof and meets the requirements of the following standards:

GTT (CS1, MIII, NO96); EN 314 /3rd class; BS 1203/H4 (previously WBP); DIN 68705 Part 3/type BFU 100.







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Sizes

1220 mm x 2440 mm 1250 mm x 2500 / 3000 mm

1500 mm x 3000 mm 1525 mm x 2500 / 3050 / 3550 mm 2150 mm x 3050 / 3340 / 3850 mm Long grain plywood panels with the length up to 2500 mm are also available.

Thickness

 $4, 6.5, 9, 12, 15, 18, 21, 24, 27, 30, 38, 35, 40, 45, 50, 92, 102 \, \text{mm}.$

Tolerance

Nominal thickness, mm	4	6.5	9	12	15	18	21	24	27	30	35	38	40	45	50	92	102
Number of plies	3	5	7	9	11	13	15	17	19	21	25	27	29	32	35	67	75
Average actual thickness, mm	3.8	6.4	9.2	12.0	14.9	17.7	20.5	23.4	26.5	29.4	35	37.5	38.7	43.6	49.6	94.0	103.0
Lower limit, mm	3.5	6.1	8.8	11.5	14.3	17.1	20.0	22.9	25.8	28.7	33.6	36.7	38.4	43.3	48.1	90	101
Upper limit, mm	4.1	6.9	9.5	12.5	15.3	18.1	20.9	23.7	26.8	29.9	35.4	38.3	41.2	46.6	51.7	97	106

Parameter	Tolerance		
Length, width (mm)			
< 1000	± 1 mm		
10002000	± 2 mm		
> 2000	± 3 mm		
Right angle	± 0.1 %		
Edge straightness	± 0.1 %		

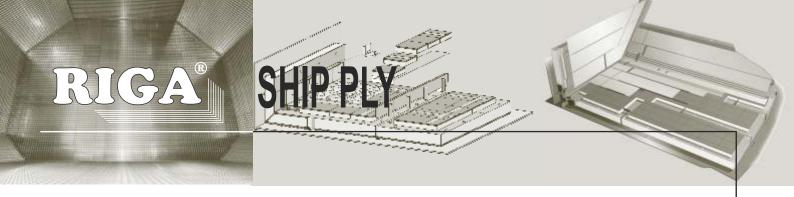
Certification status

	GTT	BV	ABS	LRS	DVN
CS1	Approved November 2002	Approved	Not requested	Not requested	Not requested
MARK III	Approved April 2002	Approved	Approved	Approved	Approved
NO96	Approved September 2004	Not requested	Not requested	Under procedure	Not requested



Reference list

Shipyard	Hull	Name	Owner/Operator	Type of Cont.	Delivery
Korean Subcontractor for Alstom C.d.A.	M32	GdF Energy	Gaz de France	CS1 - Panels	2003
French Subcontractor for Alstom C.d.A.	M32	GdF Energy	Gaz de France	CS1 - Boxes	2003
Korean Subcontractor for SHI	1502	Seri Alam	MISC	MARKIII - Panels	2004
Korean Subcontractor for Alstom C.d.A.	N32	Provalys	GdF/NYK	CS1 - Panels	2004
Korean Subcontractor for SHI	1536	Salalah LNG	OMAN/MOL	MARKIII - Panels	2004
French Subcontractor for Alstom C.d.A.	N32	Provalys	GdF/NYK	CS1 - Boxes	2004
Korean Subcontractor for SHI	1503	Seri Amanah	MISC	MARKIII - Panels	2004
Korean Subcontractor for Alstom C.d.A.	P32	Gazelys	GdF/NYK	CS1 - Panels	2004
Korean Subcontractor for SHI	1573	Ibra LNG	OMAN/MOL	MARKIII - Panels	2005
Alstom C.d.A.	P32	Gazelys	GdF/NYK	CS1 - Boxes	2005
Korean Subcontractor for SHI	1589	Seri Anggun	MISC	MARKIII - Panels	2005
Korean Subcontractor for SHI	1590	Seri Angkasa	MISC	MARKIII - Panels	2005
Korean Subcontractor for SHI	1563	LNG Borno	NYK	MARKIII - Panels	2006
Korean Subcontractor for SHI	1605	Tembek	Nakilat/OSC	MARKIII - Panels	2006
Korean Subcontractor for SHI	1564	LNG Ogun	NYK	MARKIII - Panels	2006
Korean Subcontractor for SHI	1606	Al Hamla	Nakilat/OSC	MARKIII - Panels	2006
Korean Subcontractor for SHI	1591	Sery Ayu	MISC	MARKIII - Panels	2006
Korean Subcontractor for SHI	1643	Al Huwaila	TEEKAY	MARKIII - Panels	2006
Korean Subcontractor for SHI	1644	Al Kharsaah	TEEKAY	MARKIII - Panels	2006
Korean Subcontractor for SHI	1645	Al Shamal	TEEKAY	MARKIII - Panels	2007
Korean Subcontractor for SHI	1646	Al Khuwair	TEEKAY	MARKIII - Panels	2007
Korean Subcontractor for SHI	1675	Mozah	QGTC	MARKIII - Panels	2007
Korean Subcontractor for SHI	1676	Umm Slal	QGTC	MARKIII - Panels	2007
Korean Subcontractor for SHI	1677	Bu Samra	QGTC	MARKIII - Panels	2007
Korean Subcontractor for SHI	1694	Al Mayeda	QGTC	MARKIII - Panels	2007
Korean Subcontractor for SHI	1695	Mekaines	QGTC	MARKIII - Panels	2007
Korean Subcontractor for SHI	1696	Al Ghashamiya	QGTC	MARKIII - Panels	2008



Shipyard	Hull	Name	Owner/Operator	Type of Cont.	Delivery
Korean Subcontractor for SHI	1697	Al Mafyar	QGTC	MARKIII - Panels	2008
Korean Subcontractor for SHI	1688	GdF Suez Neptune	HOEGH LNG/MOL	MARKIII - Panels	2007
Korean Subcontractor for SHI	1686	Aseem	K Line	MARKIII - Panels	2008
Korean Subcontractor for SHI	1726	Al Bahiya	RGIII TR7 #1	MARKIII - Panels	2008
Korean Subcontractor for SHI	1641	Gas Log Savannah	GASLOG	MARKIII - Panels	2009
Korean Subcontractor for SHI	1642	Gas Log Singapore	GASLOG	MARKIII - Panels	2009
Korean Subcontractor for SHI	1754	Rashida	QG4#4	MARK III-Panels	2009
Korean Subcontractor for SHI	1751	Shagra	QG4#1	MARK III-Panels	2008
Korean Subcontractor for SHI	1689	GdF Suez Cape Ann	HOEGH LNG/MOL	MARKIII - Panels	2008
Korean Subcontractor for SHI	1752	Zarga	QG4#2	MARK III-Panels	2008
Korean Subcontractor for SHI	1753	Aamira	QG4#3	MARK III-Panels	2008
Korean Subcontractor for SHI	1810	Soyo	NYK-TEEKEY	MARK III-Panels	2009
Korean Subcontractor for SHI	1811	Malanje	NYK-TEEKEY	MARK III-Panels	2010
Korean Subcontractor for SHI	1812	Lobito	NYK-TEEKEY	MARK III-Panels	2010
Korean Subcontractor for SHI	1813	Kubal	NYK-TEEKEY	MARK III-Panels	2011
Korean Subcontractor for SHI	2258		osc	MARK III-Panels	on production
Korean Subcontractor for SHI	1920		CHEVRON	MARK III-Panels	December 2012
Korean Subcontractor for SHI	1921		CHEVRON	MARK III-Panels	April 2013
Korean Subcontractor for SHI	1941		CHEVRON	MARK III-Panels	June 2013
Korean Subcontractor for SHI	1942		CHEVRON	MARK III-Panels	August 2013
Korean Subcontractor for SHI	option		CHEVRON	MARK III-Panels	tbd
Korean Subcontractor for SHI	option		CHEVRON	MARK III-Panels	tbd

Totally: 39 ships delivered 5 + 1 ships on order

Plywood is manufactured by AS Latvijas Finieris whose Quality Management System is certified to the requirements of ISO 9001 by Bureau Veritas Certification.

