

<i>Name of document</i> Declaration of performance Vänerply structural plywood K20/70	<i>Document no.</i> CPR240	<i>Page</i> 1 of 6
<i>Established by</i> Fredrik Stridh	<i>Version</i> 9	
<i>Approved by</i> Magnus Ingves	<i>Replaces edition</i> 2022-09-27	<i>Date</i> 2024-01-09

DECLARATION OF PERFORMANCE CPR240

1. Unique identification code of the product and type

Softwood structural plywood

- Vänerply K20/70
- Vänerply C/C
- Vänerply C+/C
- Vänerply CP/C
- Vänerply Weatherply
- Vänerply Prevent

2. Product

Structural plywood made of softwood, according to EN 13986:2004+A1:2015. For more, detailed information about the delivered product, beyond the information below, see specification on the package and related commercial documents.

3. Intended use of the construction product

For structural use according to Eurocode 5 (EN 1995-1-1), and other purposes where strength and stiffness of the structure is essential.

4. Manufacturer

Company: Moelven Vänerply AB
Adress: Industrivägen 10, 547 81 Otterbäcken, SWEDEN
Phone: +46 10 122 66 00
E-mail: info.vanerply@moelven.se
Web site: www.moelven.com

5. System of assessment and verification of constancy of performance of the construction product

System 2+.

6. Certification and declared performance according to the harmonized standard

Harmonized standard EN 13986:2004+A1:2015.

The notified body RISE (identification number 0402) has performed an initial inspection of the manufacturing plant and of the factory production control and performs continuous surveillance, assessment and evaluation of the factory production control. RISE has issued EC Certificate of Factory Production Control No. 0402 – CPR – 169002.

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7. Declared performance

Essential characteristics	Declared performance			
	End use condition	Minimum thickness	Fireclass excluding floorings	Fireclass floorings
Reaction to fire	With or without ventilated air gap	≥9 mm	D-s2,d0	D _n -s1
Bonding quality	3 (according to EN 314-2)			
Durability (moisture resistance)	Climate class 2 (according to EN 1995-1-1) Use class 2 (according to EN335:2013)			
Bending strenght	See attached table (annex 1 and 2)			
Bending stiffness (moduls of elasticity)	See attached table (annex 1 and 2)			
Strength, stiffness and impact on resistance for roof decking	See attached table (annex 3)			
Strength, stiffness and impact on resistance for flooring	See attached table (annex 4)			
Mean density	485 kg/m ³			
Water vapour permeability	Wet 68μ / Dry 194μ			
Sound absorption	0,1/0,3			
Release of formaldehyde	E1			
Content of pentachlorophenol	NPD (no performance detected)			
Thermal conductivity	0,13 W/mK			
Airborne sound insolation	NPD (no performance detected)			

8. Relevant essential characteristics

The characteristics declared by the product described under point 1 and 2, are the characteristics declared under point 7. This Declaration of Performance is prepared under the sole responsibility of the manufacturer, who is stated under point 4.

Otterbäcken, 2024-01-09
Magnus Ingves, CEO



(signature)

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Annex 1 – Unsanded plywood

Manufacturer: **Moelven Vänerply AB**.

Plywood according to SS-EN 13986:2004+A1:2015 in accordance with EN 636:2012+A1:2015. For use in class 1 and 2 according to SS-EN 1995-1-1.

The following characteristic values are produced through tests and calculations.

Characteristic strength (N/mm² or MPA) and density (kg/m³)

Nominal thickness	Number of plies	Density	Bending		Tension		Compression		Panel	Planar
			$f_{m,0}$	$f_{m,90}$	$f_{t,0}$	$f_{t,90}$	$f_{c,0}$	$f_{c,90}$	Shear	Shear
9 mm	3 pcs	420	22	NPD	12	4	17	4	3	1
12 mm	5 pcs	420	25	7	11	7	15	10	3	1
15 mm	5 pcs	420	25	7	11	7	15	10	3	1
18 mm	5 pcs	420	26	7	11	7	15	10	3	1
21 mm	7 pcs	420	23	8	10	8	14	11	3	1
24 mm	7 pcs	420	24	7	11	7	16	9	3	1
27 mm	7 pcs	420	20	7	10	8	14	9	3	1

Mean modulus of elasticity (N/mm² or MPA)

Nominal thickness	Number of plies	Bending		Tension and compression		Panel shear	Planar shear*
		$E_{m,0}$	$E_{m,90}$	$E_{t-c,0}$	$E_{t-c,90}$	G_v	G_r
9 mm	3 pcs	9000	NPD	6300	NPD	600	NPD
12 mm	5 pcs	9000	2100	6375	4250	600	16
15 mm	5 pcs	8913	2000	6324	4216	600	16
18 mm	5 pcs	9501	2100	6460	4307	600	16
21 mm	7 pcs	8006	2900	6023	4517	600	16
24 mm	7 pcs	8171	2400	6460	3953	600	16
27 mm	7 pcs	7000	2700	5856	4356	600	16

* Planarshear according to SS-EN 12369-2.

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Annex 2 – Sanded plywood

Manufacturer: **Moelven Vänerply AB**.

Plywood according to SS-EN 13986:2004+A1:2015 in accordance with EN 636:2012+A1:2015. For use in class 1 and 2 according to SS-EN 1995-1-1.

The following characteristic values are produced through tests and calculations.

Characteristic strength of the product (N/mm ² or MPA) and density (kg/m ³)										
Nominal thickness	Number of plies	Density	Bending		Tension		Compression		Panel Shear	Planar
			$f_{m,0}$	$f_{m,90}$	$f_{t,0}$	$f_{t,90}$	$f_{c,0}$	$f_{c,90}$	f_v	f_r
9 mm	3 pcs	420	20	NPD	11	6	15	8	3	1
12 mm	5 pcs	420	21	6	10	7	14	10	3	1
15 mm	5 pcs	420	22	6	10	7	14	10	3	1
18 mm	5 pcs	420	22	6	10	7	14	10	3	1
21 mm	7 pcs	420	20	7	9	8	13	11	3	1

Mean modulus of elasticity (N/mm ² or MPA)							
Nominell tjocklek	Antal fanér	Bending		Tension and compression		Panel shear	Planar shear*
		$E_{m,0}$	$E_{m,90}$	$E_{t,0}$	$E_{t,90}$	G_v	G_r
9 mm	3 pcs	7000	NPD	5600	NPD	600	NPD
12 mm	5 pcs	7056	1800	5695	4250	600	16
15 mm	5 pcs	7259	1700	5780	4216	600	16
18 mm	5 pcs	7369	1800	5780	4307	600	16
21 mm	7 pcs	7000	2600	5537	4517	600	16

* Planarshear according to SS-EN 12369-2.

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Annex 3 – Tongue and groove on long edges (TG2) unsanded plywood

Manufacturer: **Moelven Vänerply AB.**

Plywood according to SS-EN 13986:2004+A1:2015 in accordance with EN 636:2012+A1:2015. For use in class 1 and 2 according to SS-EN 1995-1-1.

The following characteristic values are produced through tests and calculations.

Strength, stiffness and impact resistance for roof decking according to EN12871:2013 Long edges tongue and grooved, short edges over support.

Nominal thickness	Number of plies	Span	Characteristic strength, Ultimate (N)		Mean Stiffness (N/mm)	Impact resistance
			$F_{max,k}$	$F_{ser,k}$	R_{mean}	Class
12 mm	5 pcs	600 mm	2560	2300	83	II
15 mm	5 pcs	800 mm	3000	2200	125	II
18 mm	5 pcs	1200 mm	3700	2700	100	II
21 mm	7 pcs	1200 mm	4700	4100	128	II

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Annex 4 – Tongue and groove on long edges (TG2) sanded plywood

Manufacturer: **Moelven Vänerply AB.**

Plywood according to SS-EN 13986:2004+A1:2015 in accordance with EN 636:2012+A1:2015. For use in class 1 and 2 according to SS-EN 1995-1-1.

The following characteristic values are produced through tests and calculations.

Strength, stiffness and impact resistance for roof decking according to EN12871:2013
Long edges tongue and grooved, short edges over support. Glued to support and tongue and groove.

Nominal thickness	Number of plies	Distance	Characteristic strength, Ultimate (N)		Mean Stiffness	Impact resistance
			$F_{max,k}$	$F_{ser,k}$	R_{mean}	Class
18 mm	5 pcs	400 mm	5500	4800	712	II
21 mm	7 pcs	600 mm	6000	6500	512	II