

TECHNICAL DATA SHEET

NOVATOP STATIC

NOVATOP STATIC – a multilayer panel with two parallel upper layers from each side and a middle layer with the fibres perpendicular to the course of the fibres of the surface layers.

Application	Especially for roof overlaps	
Demands	EN13353, EN13986 CE	
Technical classes	SWP/1, SWP/2 according to EN 13353	
Wood Species	Local spruce	
Surface quality	No-visual construction (corresponds to C) Visual living space (corresponds to B) Sorting of quality according to internal regulations of AGROP NOVA a.s.	
Velkoplošný formát (mm)	max. 12.000 x 2.500 (joining: tinned join)	
Large format (mm)	NOVATOP STATIC L (Bending strength parallel)	NOVATOP STATIC Q (Bending strength perpendicular)
	Length: 2.500, 5.000, 6.000 Width: 1.040, 1.250, 2.100, 2.500 Thickness: 45, 60	Length: 4.950 Width: 2.500 Thickness: 45, 60
Dimensional tolerances according to EN 13 353	Tolerance of nominal width and length: ± 2 mm Straightness of the sides: ± 1 mm/m Rectangularity: ± 1 mm/m	
Surface	Sanded – K 50, 100	
Glueing	D4 according to EN 204	
Adhesive	MU	
Formaldehyde emission class	E1 according to EN 717-1, for values refer to the test reports	
Moisture	10 % \pm 3 %	
Coefficient of shrinkage and swelling	α (%/%) 0,002 – 0,012 %	
Density	cca 490 kg/m ³	
Reaction to fire	D-s2,d0 according to EN 13501-1	
Design value of thermal conductivity (λ)	for spruce 0,13 W/mK at a density of panels of 490 kg/m ³ according to EN ISO 10456	
Specific thermal capacity (c_p)	1600 J/kgK according to EN ISO 10456	
Factor of diffusion resistance (μ)	200/70 (dry/wet) according to EN ISO 10456	
Sound absorption	250 – 500 Hz – 0,1 1000 – 2000 Hz – 0,3	
Airborne sound insulation (dB)	$R = 13 \times \log(m_a) + 14$ m_a – surface weight kg/m ²	

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CROSS-SECTIONAL VALUES

45 mm

(9p-9p-9q-9p-9p)



60 mm

(9p-9p-24q-9p-9p)



Thickness	45 mm	60 mm
Structure pattern	9p-9p-9q-9p-9p	9p-9p-24q-9p-9p
Moment of inertia I	6.05E+06 mm ⁴	1.31E+07 mm ⁴
Section modulus W	2.69E+05 mm ³	4.37E+05 mm ³

The cross-sectional values NOVATOP STATIC relate to panel width of 1 m. While determining the defluxion, take care especially of the deformation by sparing.

COMPOSITION OF LAMELLAS



NOVATOP STATIC L
Longitudinal direction of the grain of the surface lamellas



NOVATOP STATIC Q
Transverse direction of the grain of the surface lamellas

MECHANICAL PROPERTIES

Property		Testing method	Thickness	
			45 (9-9-9-9-9)	60 (9-9-24-9-9)
ρ	Density kg/m ³	EN 323	420	420
$f_{m,k}$	Characteristic bending strength perpendicular to the panel plane (N/mm ²)			
$f_{m,0,k}$	Bending strength parallel to the fibres of the outer layers	EN 789	48	35
$f_{m,90,k}$	Bending strength perpendicular to the fibres of the outer layers	EN 789	3,3	6
$E_{m,mean}$	Characteristic value of the modulus of elasticity perpendicular to the panel plane (N/mm ²)			
$E_{m,0}$	Modulus of elasticity parallel to the fibres of the outer layers	EN 789	10300	10400
$E_{m,90}$	Modulus of elasticity perpendicular to the fibres of the outer layers	EN 789	320	1000

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NOVATOP STATIC – BAZ



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Area using	The panels may be used primarily as a reinforcing and interfering in the production of wall, ceiling and roof panels and wherever you can use plywood construction (BFU) and solid wood panels according to DIN 1052:2008 -12.
Requirements	Constructional technical certificate Z - 9.1-572
Technical classes	20, 100 and 100G according to DIN 68 800-2
Wood Species	Local spruce
Glueing	AW 100 according to DIN 68705
Adhesive	MU
Standard formats (mm)	thickness: 45 (9-9-9-9-9), 60 (9-9-24-9-9) width: 1040, 1250, 2100, 2500 length: 5000, 6000
Surface	sanded – K 100
Moisture	spruce 10±3%,
Density	spruce cca 490 kg/m ³
Formaldehyde emission class	E1 according to EN 717-1, for values refer to the test reports
Reaction to fire	B2 according to DIN 4102-4
Thermal conductivity (λ)	0,13 W/mK DIN 4108-4
Diffusion resistance (μ)	200/70 (dry/wet) according to EN ISO 10456
Sound absorption	250 – 500 Hz – 0,1 1000 – 2000 Hz – 0,3
Airborne sound insulation (dB)	$R = 13 \times \log(m_a) + 14$ m_a – surface weight kg/m ²



NOVATOP STATIC L
Longitudinal direction of the grain of the surface lamellas

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NOVATOP STATIC – BAZ



Characteristic strength values of selected types of panels in N/mm² for dimensioning according to DIN 1052: 2008 - 12

Panels with continuous lamellas in the middle layers			
Type plate		45	60 Typ a
Number of layers		5	5
Thickness [mm]		45	60
Thickness of surface lamellas [mm]		18,0	18,0
Thickness of middle lamellas [mm]		9,0	24,0
Stress perpendicular to the panel plane [N/mm ²]			
$f_{m,0,k}$	Bending strength parallel to the fibres of the outer layers	29,8	28,1
$f_{m,90,k}$	Bending strength perpendicular to the fibres of the outer layers	3,1	3,6
$E_{m,0}$	Modulus of elasticity parallel to the fibres of the outer layers	11400	10800
$E_{m,90}$	Modulus of elasticity perpendicular to the fibres of the outer layers	250	550
$f_{v,k}$	Shear strength		
G	Shear modulus of elasticity		
Stress in the panel plane [N/mm ²]			
$f_{m,0,k}$	Bending strength parallel to the fibres of the outer layers	24,2	18,4
$f_{m,90,k}$	Bending strength perpendicular to the fibres of the outer layers	3,4	6,3
$f_{t,0,k}$	Tensile strength parallel to the fibres of the outer layers	16,1	12,3
$f_{t,90,k}$	Tensile strength perpendicular to the fibres of the outer layers	2,3	4,2
$f_{c,0,k}$	Compressive strength parallel to the fibres of the outer layers	24,2	18,4
$f_{c,90,k}$	Compressive strength perpendicular to the fibres of the outer layers	3,4	6,3
$f_{v,k}$	Shear strength		
$E_{m,0}$	Modulus of elasticity parallel to the fibres of the outer layers	9300	7100
$E_{m,90}$	Modulus of elasticity perpendicular to the fibres of the outer layers	1300	2400
G	Shear modulus of elasticity	600	

Note: the factor k_h is incorporated in the table.