



## Properties

### 3 glued layers in top quality for the highest requirements

K1 yellowplan is the concrete formwork panel made by Mayr-Melnhof Holz. The panels are used wherever top quality, durability, and a flawless concrete appearance are required.

K1 yellowplan panels are manufactured in Reuthe in Austria's Bregenzerwald region and promptly delivered from there to your location, or – by request – directly to the construction site. The legendary K1 yellowplan panels have been manufactured for over 50 years. Since the 1980s K1 yellowplan panels have been manufactured on an industrial production line. Today this 3-layer laminated formwork panel continues to impress with its unique quality and high form stability.

K1 yellowplan formwork panels are made in a jumbo size of 2 x 6 m as well as thicknesses of 21 and 27 mm and are then cut to smaller standard sizes.

The closed, edge-glued cover and intermediate layers without concealed edge band form the basis of the clean, characteristic concrete appearance typical of the K1 panel.



Chain of Custody  
PEFC/06-38-79

#### Hardly any crack formations

due to the beam structure in the covering layers, not even after several uses

#### The special PU edge sealing

prevents the ingress of moisture and sticking of concrete slurry

#### The surface

sanded across the entire surface and coated with a melamin resin, provides the ideal pore structure that guarantees a unique concrete face

#### No breaking of longitudinal edges

even with strong mechanical stress, due to continuous medium plies



# Technical data K1 yellowplan

## Product

3-ply concrete formwork panel with smooth surface and melamine resin coating according to Austrian standard ÖN B 3023 solid wood panels

## Wood species

Spruce, fir

## Wood moisture

12% ± 3%

## Gluing

Alkali-proof, water-resistant and weather-proof bonding according to ON B 30233

## Weight

21 mm approx. 10.0 kg/m<sup>2</sup>

27 mm approx. 12.5 kg/m<sup>2</sup>

## Features of panel

- Three-layer board, sealed, glued crosswise
- Continuously calibrated, sanded cover layer and intermediate plies
- Densely fitting, glued intermediate ply, providing stable longitudinal edges
- Edge-glued cover layer and intermediate ply, no concealed edge bands
- Production as large-format board
- Standard formats and small formats are cut precisely from large-format boards

## Formats

Standard formats (length x width in cm)

100 x 50

150 x 50

200 x 50

250 x 50

300 x 50

Jumbo formats (length x width in cm)

200 x 100/150/200

250 x 100/150/200

300 x 100/150/200

400 x 50/100/150/200

500 x 50/100/150/200

600 x 50/100/150/200

## Thicknesses

21 and 27 mm

## Surface quality

- Seamlessly sanded surface
- Resistant melamine coating

## Edge-coating

- Water-based edge paint, grey, yellow, red
- PU edge sealing, red available on request

## Packaging

Packages: 50 pieces of 21 mm or 40 pieces of 27 mm thickness

- Delivered suitable for the construction site, protected by integrated supporting timber
- The package units for jumbo formats are subject to arrangement

## Dimensional tolerances

Thicknesses	21 and 27 mm	± 1 mm
Widths	50 ≤ 200 cm	± 1 mm
Lengths	100 ≤ 250 cm	± 1 mm
	300 ≤ 600 cm	± 2 mm
Longitudinal curvature	100 ≤ 300 cm	± 1 mm
	301 ≤ 600 cm	± 1.5 mm
	Widths < 50 cm	± 1 %

## Design values

Mechanical characteristics according to ON B3023 for a nominal thickness of 21 and 27 mm

Medium elasticity module	10.000 N/mm <sup>2</sup>
Characteristic bending strength	22 N/mm <sup>2</sup>

*The calculated values with a wood moisture of 12%. With heavy moisture penetration up to fiber saturation point, the values for bending strength and flexural modulus of elasticity may be up to 30% lower.*

# Quality

Load q [kN/m <sup>2</sup> ]	Span L [m]							
	0.40	0.45	0.50	0.55	0.60	0.65	0.70	0.75
d = 21 mm								
5 kN/m <sup>2</sup>	0.11	0.17	0.26	0.38	0.54	0.75	1.00	1.32
10 kN/m <sup>2</sup>	0.21	0.34	0.52	0.77	1.08	1.49	2.01	2.65
15 kN/m <sup>2</sup>	0.32	0.51	0.78	1.15	1.63	2.24	3.01	3.97
20 kN/m <sup>2</sup>	0.43	0.69	1.05	1.53	2.17	2.99	4.02	5.30
25 kN/m <sup>2</sup>	0.54	0.86	1.31	1.91	2.71	3.74	5.02	6.62
30 kN/m <sup>2</sup>	0.64	1.03	1.57	2.30	3.25	4.48	6.03	7.95
35 kN/m <sup>2</sup>	0.75	1.20	1.83	2.68	3.80	5.23	7.03	9.27
40 kN/m <sup>2</sup>	0.86	1.37	2.09	3.06	4.34	5.98	8.04	10.59

d = 21 mm

E = 10,000 N/mm<sup>2</sup> of K1 yellowplan d = 21 mm

k = 0.646

Deformation factor contingent on number of fields for constant load

Load q [kN/m <sup>2</sup> ]	Span L [m]							
	0.40	0.45	0.50	0.55	0.60	0.65	0.70	0.75
d = 27 mm								
5 kN/m <sup>2</sup>	0.05	0.08	0.12	0.18	0.26	0.35	0.47	0.62
10 kN/m <sup>2</sup>	0.10	0.16	0.25	0.36	0.51	0.70	0.95	1.25
15 kN/m <sup>2</sup>	0.15	0.24	0.37	0.54	0.77	1.05	1.42	1.87
20 kN/m <sup>2</sup>	0.20	0.32	0.49	0.72	1.02	1.41	1.89	2.49
25 kN/m <sup>2</sup>	0.25	0.40	0.62	0.90	1.28	1.76	2.36	3.12
30 kN/m <sup>2</sup>	0.30	0.48	0.74	1.08	1.53	2.11	2.84	3.74
35 kN/m <sup>2</sup>	0.35	0.57	0.86	1.26	1.79	2.46	3.31	4.36
40 kN/m <sup>2</sup>	0.40	0.65	0.98	1.44	2.04	2.81	3.78	4.98

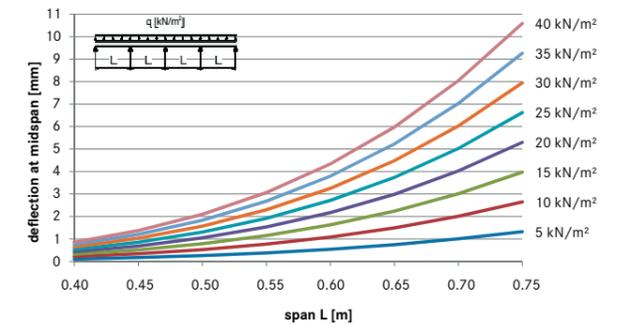
d = 27 mm

E = 10,000 N/mm<sup>2</sup> of K1 yellowplan d = 27 mm

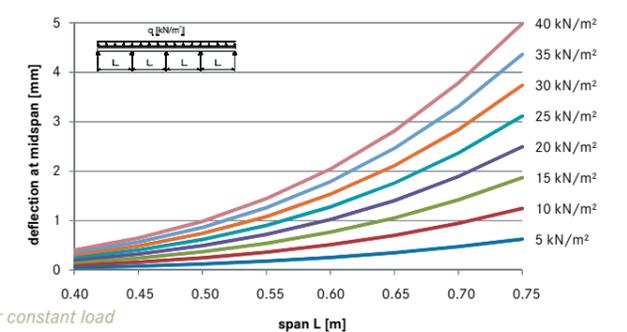
k = 0.646

Deformation factor contingent on number of fields for constant load

Deflection of formwork panel K1 yellowplan d = 21 mm



Deflection of formwork panel K1 yellowplan d = 27 mm



## Product standard and quality definition

The product standard for 3-ply concrete formwork panels (ÖN B 3023) refers, for purposes of classification and test procedures for factory-owned production control, to the relevant European standards on solid wood panels. In terms of wood quality, the surface reflects the appearance class S for solid wood panels (EN 13017-1 Tab.1). The surface structure and coating is assigned to the smooth GL category according to ÖN B 3023. The bonding quality must be tested according to ÖNORM EN 13354 and must comply with the requirements of ÖNORM EN 13353 for multi-layer solid timber boards used in moist areas (SWP/2).

## Concrete appearance

Due to the lamella structure of the outer layers, the concrete will reveal a smooth and light wood grain which becomes more visible with the increase of the panel's service life. The yellow melamine coating protects the panel and ensures the surface finish. It is classified as lightly absorbent. With time and the number of usages, the absorptive capacity of the panel surface decreases and the concrete face becomes lighter.



## Fair-faced concrete

A variety of experience is available in the use of 3-ply melamine coated concrete formwork panels for fair-faced concrete. Depending on the materials, surface defects in the wood (knots, resin pockets, nail holes, filled knot holes or cracks) will influence the absorptive capacity of the formwork facing and cause dark spots in the concrete when first using panels. Better results for fair-faced concrete are obtained starting with the 2<sup>nd</sup> concrete use when residues on the melamine coating from the formwork facing are removed through alkaline reaction or neutralized by the concrete. The recommendations and guidelines of the Cement and Construction Industry must be taken into account - e.g. DBV/VDZ data sheet on "Fair-Faced Concrete" (revised edition 06/2015, published by DBV Deutscher Beton- und Bautechnikerverein e.V.).