



lipbled[®]

OPAŽNE | SHUTTERING **PLOŠČE | PANELS**

za gradbeništvo

for the construction industry




OPAŽNE PLOŠČE: SELECT | STANDARD | PREMIUM SB | OPAŽNI NOSILCI | OPAŽNI SISTEM

SHUTTERING PANELS: SELECT | STANDARD | PREMIUM SB | FORMWORK GIRDERS | FORMWORK SYSTEMS



www.lip-bled.si


 že od leta 1948
since 1948



Življenje Life

A solid yellow horizontal banner containing the text.

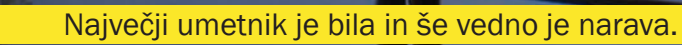
ob jezeru, obdanem z zelenimi gozdovi, nas je naučilo ceniti in spoštovati naravo.

A scenic photograph of a lake in a mountainous region. In the foreground, a wooden pier extends into the water. The middle ground features a large, white church with a tall, square tower and a dark, domed roof. The church is surrounded by evergreen trees. In the background, there are more trees and mountains under a clear blue sky. The water in the lake is calm, reflecting the church and the surrounding landscape.

Ker naše surovine prihajajo iz gozdov, imamo v podjetju še toliko bolj odgovoren odnos do narave. V podjetju z gospodarno proizvodnjo ter uporabo naravi prijaznih materialov in snovi sledimo globalnim načelom in najvišjim standardom EU o varovanju okolja in zmanjševanju onesnaževanja.

in the countryside next to a picture-perfect alpine lake, surrounded by a green forest, has taught us to respect the environment.

Since forests provide us with raw materials, our company feels highly committed to a sustainable and environmentally-friendly production. By complying with global principles and the highest EU environmental standards, we contribute towards reducing the level of environmental pollution with our efficient manufacturing process and the use of environmentally-friendly materials.

A solid yellow horizontal banner containing the text.

Največji umetnik je bila in še vedno je narava.

The greatest artist is and remains Mother Nature.

OPAŽNE plošče

SHUTTERING panels

Prednosti opažnih plošč lipbled

Advantages of lipbled shuttering panels

- + Kakovostna smrekovina iz naših gozdov, ki je glavna sestavina plošč.
High quality spruce wood from our forests is the main component of lipbled shuttering panels.
- + Ker je površina prevlečena z melaminsko smolo, robovi pa z akrilnim slojem, se plošče ne sprijemajo z betonom.
A melamine resin covered surface and acrylic-coated edges prevent the panels and concrete from sticking together.
- + Za dodatno zaščito proti vplivu vlage na delovanje plošče so robovi srednjega sloja zaprti z vzdolžnimi in čelnimi letvicami.
A middle layer framed with head and side battens offers an additional moisture protection against warping.
- + Velika upogibna trdnost in dimenzijska stabilnost plošč.
High bending strength and dimensional stability.
- + Zaradi trislojnega lepljenja je delovanje plošče minimalno.
Minimal panel warping due to the three-layer gluing procedure.
- + Večkratna uporaba.
Intended for multiple use.
- + Dolga tradicija proizvodnje (že od leta 1961).
Long tradition of manufacturing (since 1961).
- + Več kot 50-letne izkušnje pri prodaji plošč na zahtevnih trgih Zahodne Evrope.
More than 50 years of experience in selling panels on the highly competitive Western European markets.

Lastnosti in uporaba Features and application

- + Primerno za opaženje betonskih konstrukcij.
Used as formwork for concrete constructions.
- + Večkratna in preprosta uporaba.
Multiple and easy use.
- + Plošče so izdelane iz treh medsebojno križno in vodoodporno zlepljenih slojev lesa, predvsem smrekovine. Zunanji sloj sestavljajo širinsko zlepljene lamele, ki potekajo v vzdolžni smeri, srednji sloj pa prečno položene deščice, ki so uokvirjene z vzdolžnimi in čelnimi zaključnimi letvicami.
The panels are made of three wooden layers, mostly spruce, which are glued together crosswise and are waterproof. The two external layers consist of longitudinal lamellas glued sideways to each other. The middle layer is made of small crosswise boards framed with side and head battens.
- + Kakovost ploskovnega lepljenja je v skladu s standardom AW 100 (DIN 68705), kakovost celotne plošče pa s standardom ÖN B 3023.
The layers are glued together according to the AW 100 standard (DIN 68705). The quality of the entire panel meets the ÖN B 3023 standard.
- + Plošče so zaščitene z melaminsko smolo, izdelane po vročem postopku (se ne sprijemajo z betonom).
The panels are coated with a melamine resin made in accordance with a high-temperature method (prevents adhesion with the concrete).
- + Robovi plošč so zaščiteni z akrilnim premazom.
Panel edges are protected by an acrylic layer.
- + Plošče so dimenzijsko stabilne, zaradi trislojnega lepljenja pa je njihovo ukrivljanje minimalno.
Warping of the dimensionally stable panels is minimal due to the three-layer gluing procedure.
- + Velika upogibna trdnost.
High bending strength.
- + Barva plošč rumena.
Panel colour: yellow.



- Lepljeno z melaminsko smolo
Glued with melamine resin
- Vodoodporen lepilni spoj
Bonded with waterproof adhesive
- Kakovost ploskovnega lepljenja je v skladu s standardom AW 100 (DIN 68705), kakovost celotne plošče pa s standardom ÖN B 3023
The layers are glued together according to the AW 100 standard (DIN 68705). The quality of the entire panel meets the ÖN B 3023 standard.
- Zaradi trislojnega lepljenja je delovanje plošče minimalno
Minimal panel warping due to the three-layer gluing procedure.



Debelina (mm) Thickness (mm)	Širina (mm) Width (mm)	Dolžina (mm) Length (mm)
21 mm (20,9 mm ± 1 mm)	500	1.000, 1.500, 2.000, 2.500, 3.000
27 mm (26,6 mm ± 1 mm)		

Prevoz na tovornem vozilu Transport by freight vehicles

- + debelina / 27 mm: 1.900 m² / vlačilec (13,6 m)
thickness / 27 mm: 1.900 m² / lorry (13,6 m)
- + debelina / 21 mm: 2.300 m² / vlačilec (13,6 m)
thickness / 21 mm: 2.300 m² / lorry (13,6 m)

Pakiranje Packaging

- + Paletno: standardno po 40 kos/zložaj (27 mm),
2 x 50 kos/zložaj (21 mm), zaščiteno s folijo PVC.
Pallet: standard 40 pcs / pallet (27 mm),
2 x 50 pcs / pallet (21 mm), protected with a PVC foil.
- + Zložaje sestavimo tudi po želji kupca.
Packages may also be arranged according to the customer's needs.



Debelina plošče
Panel thickness

21 mm

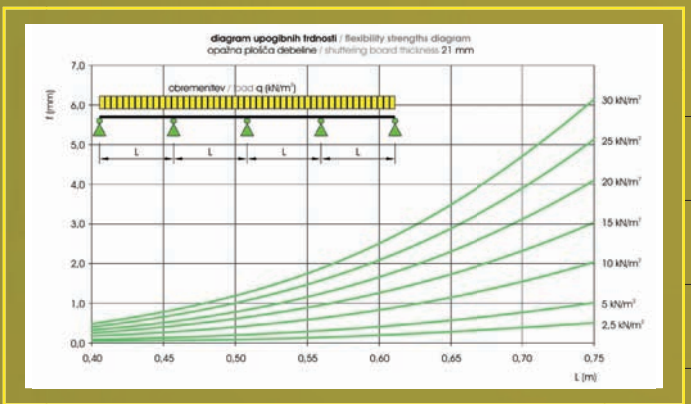
Prerez
Cross section $A_{bruto} = 20.900 \text{ mm}^2/\text{m}$ $MOE = 12.000 \text{ N/mm}^2$

Odpor. moment
Section modulus $W_{bruto} = 72.802 \text{ mm}^3/\text{m}$ $f_{m,k} = 40 \text{ N/mm}^2$

Vztr. moment
Moment of inertia $J_{bruto} = 760.777 \text{ mm}^4/\text{m}$ $M_k = 2,91 \text{ kNm/m}$

Zun. sloj
External layer 6,3 mm

Srednji sloj
Middle layer 8,3 mm

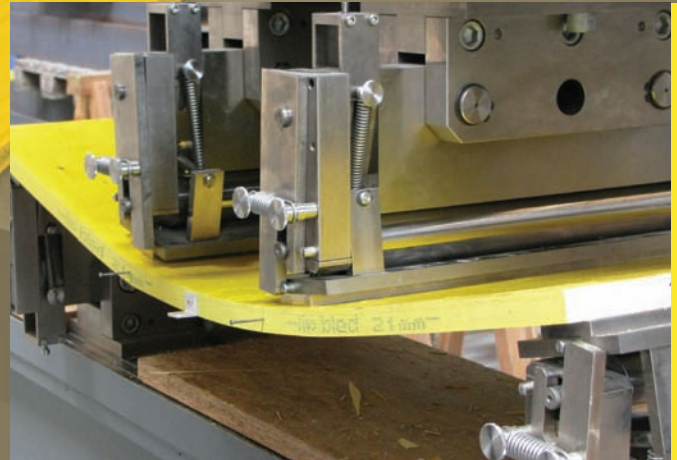


Testirano po standardu EN 789:2005 Tested in accordance with EN 789:2005



vodoodporen lepilni sloj (AW 100)
waterproof adhesive layer (AW 100)



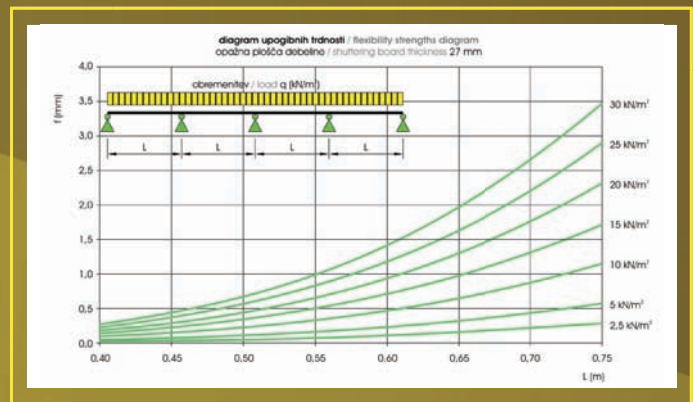


Preizkus opažne plošče v laboratoriju (Tehnična univerza v Grazu / Avstrija)
Shuttering panel laboratory test (Graz University of Technology, Austria)

Debelina plošče
Panel thickness

27 mm

Prerez Cross section	$A_{bruto} = 26.600 \text{ mm}^2/\text{m}$	$MOE = 11.000 \text{ N/mm}^2$
Odpor. moment Section modulus	$W_{bruto} = 117.927 \text{ mm}^3/\text{m}$	$f_{m,k} = 40 \text{ N/mm}^2$
Vztr. moment Moment of inertia	$J_{bruto} = 1.568.425 \text{ mm}^4/\text{m}$	$M_k = 4,72 \text{ kNm/m}$
Zun. sloj External layer	6,3 mm	
Srednji sloj Middle layer	14 mm	



Testirano po standardu EN 789:2005 Tested in accordance with EN 789:2005

Navodila za uporabo Application instruction



robovi, zaprti z vzdolžnimi in čelnimi letvami
edges framed with side and head battens

lepljeno z melaminsko smolo
glued with melamine resin

- + Plošče pred betoniranjem vedno temeljito navlažimo z vodo.
Prior to concreting, moisten the panels thoroughly with water.
- + Plošče po razopaževanju čim prej očistimo in zložimo na ravno podlago.
After removing the panels from the concrete, clean them as quickly as possible and place them on a flat surface.
- + Za nego plošč priporočamo uporabo parafinskih voskov in olj (tudi pred prvo uporabo), ki se uporabijo v skladu z navodili proizvajalca.
For panel maintenance, we recommend using paraffin wax and oil in accordance with the manufacturer's instructions (also prior to the first application).
- + Plošče ne smejo biti dlje časa izpostavljene neposredni sončni svetlobi.
Prevent prolonged exposure of the panels to direct sunlight.
- + Priporočamo skladiščenje v senci.
It is recommended to store the product in a dark place, away from direct sunlight.
- + V plošče čim manj žebljamo, vijčamo in vrtamo.
Avoid damaging the panels with nails, screws and drill holes.

NOVO INNOVATION

PREMIUM

SB opažna plošča
shuttering panel

- novost našega razvoja
Developed by LIP Bohinj
- za opaženje vidnega betona
Used for formworking exposed concrete
- brezhibna površina
Flawless surface



Lastnosti in uporaba Features and application

- + Primerno za opaženje betonskih konstrukcij s posebnimi zahtevami (vidni beton z nevtrarno strukturo).

Used for formworking concrete constructions with special demands (exposed concrete with a neutral structure).

- + PREMIUM SB »Sichtbeton« (vidni beton).

PREMIUM SB "Exposed Concrete"

- + Večkratna in preprosta uporaba, izredna ekonomičnost in uporabna vrednost.

Multiple and easy use, high efficiency and practical value.

- + Plošče so izdelane iz treh medsebojno vodoodporno zlepljenih slojev lesa, predvsem smrekovine. Zunanji sloj sestavljajo široko zlepljene lamele, ki potekajo v vzdolžni smeri, srednji sloj pa prečno položene deščice, ki so uokvirjene z vzdolžnimi in čelnimi zaključnimi letvicami

Konstrukcija je oplemenitena z 1,6 mm debelim slojem iz neoporečnega polipropilenskega materiala, ki je primeren za recikliranje.

The panels are made of three wooden layers, mostly spruce, which are glued together crosswise and are waterproof. The two external layers consist of longitudinal lamellas glued sideways to each other. The middle layer is made of small crosswise boards framed with side and head battens.

The construction is completed with a 1.6 mm thick layer of environmentally-friendly and recyclable polypropylene.

- + Kakovost ploskavnega lepljenja je v skladu s standardom AW 100 (DIN 68705), kakovost celotne plošče pa s standardom ÖN B 3023.

The layers are glued together according to the AW 100 standard (DIN 68705). The quality of the entire panel meets the ÖN B 3023 standard.

- + Robovi plošč so zaščiteni z akrilnim premazom.

The panel edges are protected by an acrylic layer.

- + Plošče so dimenzijsko stabilne, zaradi trislojnega lepljenja pa je njihovo ukrivljanje minimalno.

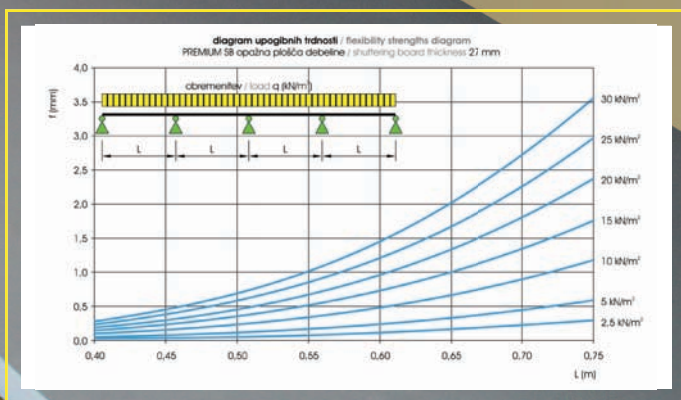
Warping of the dimensionally stable panels is minimal due to the three-layer gluing procedure.

- + Velika upogibna trdnost.

High bending strength.

- + Barva plošč siva.

Panel colour: grey.



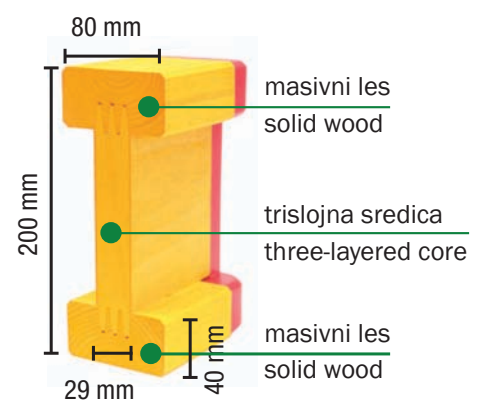
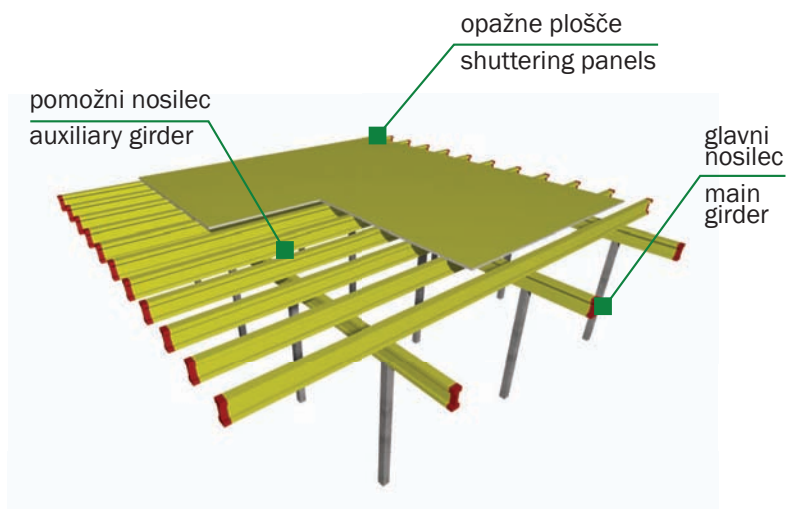
Testirano po standardu EN 789:2005 Tested in accordance with EN 789:2005

Debelina (mm) Thickness (mm)	Širina (mm) Width (mm)	Dolžina (mm) Length (mm)
27	500	2.000, 2.500, 3.000

Prerez Cross section	$A_{bruto} = 27.000 \text{ mm}^2 / \text{m}$	$MOE = 8.000 \text{ N/mm}^2$
Odpor. moment Section modulus	$W_{bruto} = 120.000 \text{ mm}^3 / \text{m}$	$f_{m,k} = 33 \text{ N/mm}^2$
Vztr. moment Moment of inertia	$J_{bruto} = 1.600.000 \text{ mm}^4 / \text{m}$	$M_k = 3,96 \text{ kNm/m}$
Zun. sloj External layer	1,6 + 6,4 mm	
Srednji sloj Middle layer	10,8 mm	

OPAŽNI nosilci FORMWORK girders »H-20«

Kakovost Quality	DIN 1052-1:1988-04	DIN 1052:2008-12 / EUROCODE 5
Dolžine nosilcev (m) Girder lengths (m)	2,45 / 2,90 / 3,30 / 3,60 / 3,90 / 4,90 / 5,90	druge dolžine po dogovoru other lengths on request
Višina prereza Cross-section height	200 mm +/- 2 mm	
Kosov v zložaju Pieces per package	50	pezzi / pacco pièces / paquet
Teža Weight	4,7 kg/m	



OPAŽNI SYSTEM FORMWORK SYSTEM



nastavljiv veznik za stebre (A012A)
adjustable pillar binder (A012A)



zagozda tip A (A013A)
wedge, type A (A013A)

Prednosti opažnih sistemov Advantages of formwork systems

- + Enostavno
Simple
- + Hitro
Quick
- + Ugodno
Affordable



Vežniki: Binders:

A006A



A006B



A006C



Distančniki: Spacers:

tip Y (ADY ...)
type Y (ADY ...)



tip B (ADB ...)
type B (ADB ...)





**Razvoj praktičnih celostnih rešitev je izziv,
s katerim se uspešno srečujemo vsak dan.
Zato je vsak projekt zgodba zase.**

**Our strength lies in the ability to develop
flexible overall solutions. That is why each
project is unique.**





Iz skrbno negovanih slovenskih gozdov ... z ljubeznijo do narave in lesa ...
From sustainably cultivated Slovenian forests ... with the love of wood and nature ...



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