

The Formwork Experts.

# Formwork sheets

## User Information

Instructions for assembly and use (Method statement)



9792-803-01

# Contents

<b>3</b>	<b>Introduction</b>
3	Elementary safety warnings
6	Services
7	Formwork sheets
<b>8</b>	<b>3-ply sheets</b>
8	Doka formwork sheet 3-SO
9	Formwork sheet 3S basic
10	Formwork sheet 3S top
11	Formwork sheet 3S cut
12	Doka formwork sheet FF20
14	Three-ply sheet without coating
<b>15</b>	<b>Multi-ply formwork sheets</b>
15	Xlife sheet Framax
16	Xlife sheet Alu-Framax
17	Xlife sheet Frami
18	Xlife sheet Dokadek
19	Xlife sheet DokaXlight
20	Xface sheet
21	Framax sheet
22	Frami sheet
23	Dokaplex formwork sheet
24	DokaPly Birch
25	DokaPly Birch plus
26	DokaPly Spruce
27	DokaPly eco
28	DokaPly natural
29	DokaPly cBoard
30	UNIplex
31	UNIplex plus
32	CUTplex
33	CUTplex basic
34	FILLplex
35	FILLplex budget
36	EUCApex
37	EUCApex plus
<b>38</b>	<b>General</b>
39	Deflection diagrams
47	Influences on the formwork sheets and concrete surfaces
52	Transporting, stacking and storing
<b>54</b>	<b>Article list</b>

# Introduction

## Elementary safety warnings

### User target groups

- This booklet is aimed at all persons who will be working with the Doka product or system that it describes. It contains information on the standard design for setting up this system, and on correct, compliant utilisation of the system.
- All persons working with the product described herein must be familiar with the contents of this booklet and with all the safety instructions it contains.
- Persons who are incapable of reading and understanding this booklet, or who can do so only with difficulty, must be instructed and trained by the customer.
- The customer is to ensure that the information materials provided by Doka (e.g. User Information booklets, Instructions for Assembly and Use, Operating Instruction manuals, plans etc.) are up to date and available to all users, and that they have been made aware of them and have easy access to them at the usage location.
- In the relevant technical documentation and formwork utilisation plans, Doka shows the workplace safety precautions that are necessary in order to use the Doka products safely in the usage situations shown.  
In all cases, users are obliged to ensure compliance with national laws, standards and regulations throughout the entire project and to take appropriate additional or alternative workplace safety precautions where necessary.

### Hazard assessment

- The customer is responsible for drawing up, documenting, implementing and continually updating a hazard assessment at every job-site.  
This booklet serves as the basis for the site-specific hazard assessment, and for the instructions given to users on how to prepare and utilise the system. It does not substitute for these, however.

### Remarks on this booklet

- This document can be used as general Instructions for Assembly and Use (Method Statement) or be incorporated into site-specific Instructions for Assembly and Use (Method Statement).
- **The graphics, animations and videos in this document or app sometimes depict partially assembled assemblies and may require additional safety equipment and/or measures to comply with safety regulations.**  
The customer must ensure all applicable regulations are complied with, even if they are not shown or implied in the graphics, animations and videos provided.
- **Individual sections contain further safety instructions and/or special warnings as applicable.**

### Planning

- Provide safe workplaces for those using the formwork (e.g. for when it is being erected/dismantled, modified or repositioned etc). It must be possible to get to and from these workplaces via safe access routes!
- **If you are considering any deviation from the details and instructions given in this booklet, or any application which goes beyond those described in the booklet, then revised static calculations must be produced for checking, as well as supplementary assembly instructions.**

### Regulations; industrial safety

- All laws, Standards, industrial safety regulations and other safety rules applying to the utilisation of our products in the country and/or region in which you are operating must be observed at all times.
- If a person or object falls against, or into, the side-guard component and/or any of its accessories, the component affected may only continue in use after it has been inspected and passed by an expert.

## Rules applying during all phases of the assignment

- The customer must ensure that this product is erected and dismantled, reset and generally used for its intended purpose in accordance with the applicable laws, standards and rules, under the direction and supervision of suitably skilled persons. These persons' mental and physical capacity must not in any way be impaired by alcohol, medicines or drugs.
- Doka products are technical working appliances which are intended for industrial / commercial use only, always in accordance with the respective Doka User Information booklets or other technical documentation authored by Doka.
- The stability and load-bearing capacity of all components and units must be ensured during all phases of the construction work!
- Do not step on or apply strain to cantilevers, closures, etc. until suitable measures to ensure their stability have been correctly implemented (e.g. by tie-backs).
- Strict attention to and compliance with the functional instructions, safety instructions and load specifications are required. Non-compliance can cause accidents and severe injury (risk of fatality) and considerable damage to property.
- Sources of fire in the vicinity of the formwork are prohibited. Heaters are permissible only when used correctly and situated a correspondingly safe distance from the formwork.
- Customer must give due consideration to any and all effects of the weather on the equipment and regards both its use and storage (e.g. slippery surfaces, risk of slipping, effects of the wind, etc.) and implement appropriate precautionary measures to secure the equipment and surrounding areas and to protect workers.
- All connections must be checked at regular intervals to ensure that they are secure and in full working order.  
In particular threaded connections and wedged connections have to be checked and retightened as necessary in accordance with activity on the jobsite and especially after out-of-the-ordinary occurrences (e.g. after a storm).
- It is strictly forbidden to weld Doka products – in particular anchoring/tying components, suspension components, connector components and castings etc. – or otherwise subject them to heating.  
Welding causes serious change in the microstructure of the materials from which these components are made. This leads to a dramatic drop in the failure load, representing a very great risk to safety.  
It is permissible to cut individual tie rods to length with metal cutting discs (introduction of heat at the end of the rod only), but it is important to ensure that flying sparks do not heat and thus damage other tie rods.  
The only articles which are allowed to be welded are those for which the Doka literature expressly points out that welding is permitted.

## Assembly

- The equipment/system must be inspected by the customer before use, to ensure that it is in an acceptable condition. Steps must be taken to exclude components that are damaged, deformed, or weakened due to wear, corrosion or rot (e.g. fungal decay).
- Using our safety and formwork systems together with those of other manufacturers can create risks that may lead to injury and damage to property. This requires separate verification by the user.
- The equipment/system must be assembled and erected in accordance with the applicable laws, standards and rules by trained customer personnel whilst maintaining any applicable safety inspections that may be required.
- It is not permitted to modify Doka products; such modifications constitute a safety risk.

## Closing the formwork

- Doka products and systems must be set up so that all loads acting upon them are safely transferred!

## Pouring

- Do not exceed the permitted fresh-concrete pressures. Over-high pouring rates overload the formwork, cause greater deflection and risk breakage.

## Stripping the formwork

- Do not strip out the formwork until the concrete has reached sufficient strength and the person in charge has given the order for the formwork to be stripped out!
- When stripping out the formwork, never use the crane to break concrete cohesion. Use suitable tools such as timber wedges, special pry-bars or system features such as Framax stripping corners.
- When stripping out the formwork, do not endanger the stability of any part of the structure, or of any scaffolding, platforms or formwork that is still in place!

## Transporting, stacking and storing

- Observe all country-specific regulations applying to the handling of formwork and scaffolding. For system formwork the Doka slinging means stated in this booklet must be used – this is a mandatory requirement.  
If the type of sling is not specified in this document, the customer must use slinging means that are suitable for the application envisaged and that comply with the regulations.
- When lifting, always make sure that the unit to be lifted and its individual parts can absorb the forces that occur.
- Remove loose parts or secure them so that they cannot slip out of position and drop.
- When lifting formwork or formwork accessories with a crane, no persons must be carried along, e.g. on working platforms or in multi-trip packaging.
- All components must be stored safely, following all the special Doka instructions given in the relevant sections of this document!

## Maintenance

- Only original Doka components may be used as spare parts. Repairs may only be carried out by the manufacturer or authorised facilities.

## Miscellaneous

The weights as stated are averages for new material; actual weights can differ, depending on material tolerances. Dirt accretions, moisture saturation, etc. can also affect weight.

We reserve the right to make alterations in the interests of technical progress.

## Eurocodes at Doka

**The permissible values stated in Doka documents (e.g.  $F_{perm} = 70 \text{ kN}$ ) are not design values (e.g.  $F_{Rd} = 105 \text{ kN}$ )!**

- It is essential to avoid confusing permissible values with design values!
- Doka documents will continue to state the permissible values.

Allowance has been made for the following partial factors:

- $\gamma_F = 1.5$
- $\gamma_{M, \text{timber}} = 1.3$
- $\gamma_{M, \text{steel}} = 1.1$
- $k_{mod} = 0.9$

Consequently, all the design values for an EC design calculation can be determined from the permissible values.

## Symbols used

The following symbols are used in this document:



### DANGER

This is a notifier drawing attention to an extremely dangerous situation in which non-compliance with this notifier will lead to death or severe, irreversible injury.



### WARNING

This is a notifier drawing attention to a dangerous situation in which non-compliance with this notifier can lead to death or severe, irreversible injury.



### CAUTION

This is a notifier drawing attention to a dangerous situation in which non-compliance with this notifier can lead to slight, reversible injury.



### NOTICE

This is a notifier drawing attention to a situation in which non-compliance with this notifier can lead to malfunctions or damage to property.



### Instruction

Indicates that actions have to be performed by the user.



### Sight-check

Indicates that you need to do a sight-check to make sure that necessary actions have been carried out.



### Tip

Points out useful practical tips.



### Reference

Cross-references other documents.



## Services

### Support in every stage of the project

- Project success assured by products and services from a single source.
- Competent support from planning through to assembly directly on site.

#### Project assistance from start to finish

Every single project is unique and calls for individualised solutions. When it comes to the forming operations, the Doka team can help you with its consulting, planning and ancillary services in the field, enabling you to carry out your project effectively, safely and reliably. Doka assists you with individual consulting services and customised training courses.

#### Efficient planning for a safe project sequence

Efficient formwork solutions can only be developed economically if there is an understanding of project requirements and construction processes. This understanding is the basis of Doka engineering services.

#### Optimise construction workflows with Doka

Doka offers special tools that help you in designing transparent processes. This is the way to speed up pouring processes, optimise inventories and create more efficient formwork planning processes.

#### Custom formwork and on-site assembly

To complement its system formwork range, Doka offers customised formwork units. And specially trained personnel assemble load-bearing towers and formwork on site.

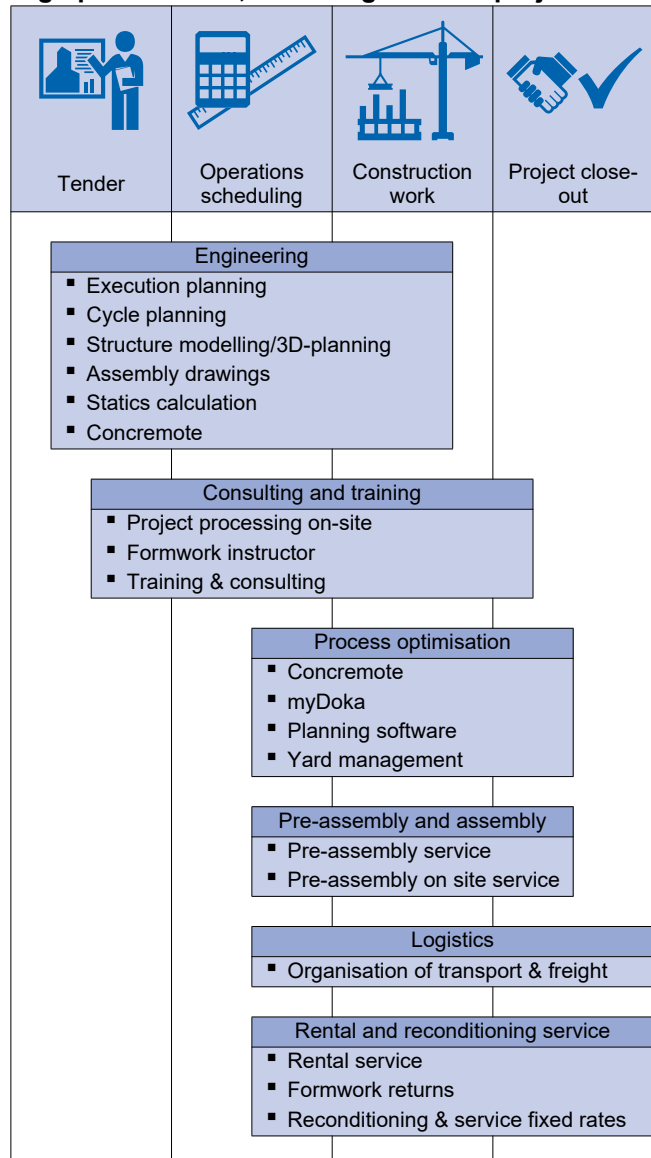
#### Just-in-time availability

Formwork availability is a crucial factor in realising your project on time and on budget. The worldwide logistics network puts the necessary formwork quantities on site at the agreed time.

#### Rental and reconditioning service

The formwork material needed for any particular project can be rented from Doka's high-performing rental park. Doka Reconditioning cleans and overhauls both client-owned equipment and Doka rental equipment.

### High performance, in all stages of the project



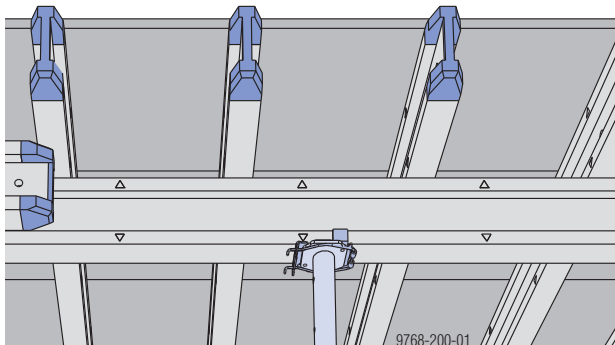
#### upbeat construction digital services for higher productivity

From planning through to completion - with upbeat construction we'll be moving construction forward and upping the beat for more productive building with all our digital services. Our digital portfolio covers the entire construction process and is being extended all the time. To find out more about our specially developed solutions go to [doka.com/upbeatconstruction](https://doka.com/upbeatconstruction).

## Formwork sheets

Doka formwork sheets as concrete-wetted elements are used with wooden or metal supporting structures for forming fresh concrete and for the related necessary activities.

### Practical example

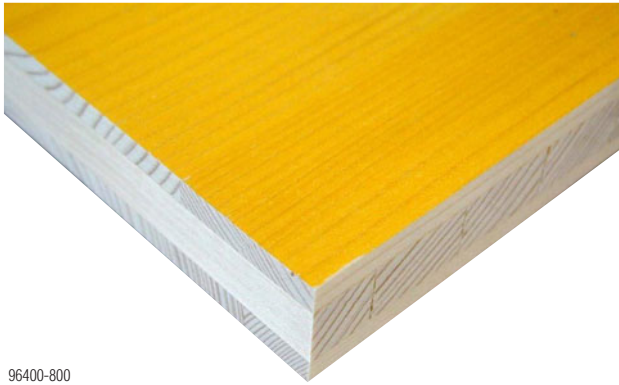


You will also find information on correct usage in the respective User Information booklet.

- Large-area formwork Top 50
- Dokaflex

## 3-ply sheets

### Doka formwork sheet 3-SO



96400-800

The Doka formwork sheet 3-SO is a high-grade three-ply solid-wood sheet with urea-melamine resin coating on both sides to Austrian standard ÖNORM B 3023, for horizontal and vertical formwork applications.

### Sheet structure

- Three-ply solid-wood sheet, spruce.
- The layers are crosswise glue-bonded.
- With/without all-round edge strip.

### Glue-bonding

- Boil-resistant, alkali-resistant, water-resistant and weather-resistant.
- The glue-bonding is compliant with the requirements of Austrian standard ÖNORM B 3023.

### Surfaces

- Both sides urea-melamine resin coating with approx. 130 g per m<sup>2</sup> and side.
- Edge sealing: Emulsion coating.

### Technical data

#### Note:

All values in the tables are based on a sheet moisture content of 12 ± 3% on delivery.

Changes in the wood's moisture content can have effects on the weight, dimensions and mechanical properties of the sheet.

The grain of the outside layers of this formwork sheet runs parallel to the longitudinal direction of the sheet.

#### Thickness and weight:

Nominal thickness [mm]	Layers	Weight [kg/m <sup>2</sup> ]
21	3	9.7
27		12.1

#### Formats:

Length [cm]	Width [cm]
100 - 600	50 - 150

#### Format tolerances:

	Tolerance
Width	±1.0 mm
Length up to 3.0 m	±1.0 mm
Length 3.0 - 6.0 m	±1.5 mm
Perpendicularity	±1.0 mm/m
Straightness of sheet edge	±0.2 mm/m

#### Mechanical properties (to ÖNORM B 3023):

Nominal thickness [mm]	E <sub>m</sub> [N/mm <sup>2</sup> ]		f <sub>m</sub> [N/mm <sup>2</sup> ]		EI [kNm <sup>2</sup> /m]	
		⊥		⊥		⊥
21	10000	-	22	-	7.82	-
27	10000	-	22	-	15.40	-

E<sub>m</sub> ... mean flexural modulus of elasticity

f<sub>m</sub> ... characteristic flexural stiffness

EI ... flexural strength

|| ... parallel to the grain

⊥ ... at right angles to the grain

- **Fire behaviour:** D - s2, d0
- **Thermal conductivity:** 0.13 W/mK
- **Formaldehyde class:** E1

### Number of cycles

Possible frequency of use depends on many factors acting on the formwork sheet. Given optimum conditions of use and correct handling, up to **25 use cycles** (guide value) can be achieved.

### Type of application and concreting results

The sheet has a 'low-absorbency' surface. Depending on the moisture penetration of the formwork sheet, its surface texture, i.e. the irregularities in the face layer (annual rings, knots etc.), imprints itself on the concrete, delivering uniform concrete faces with a slight wood texture.

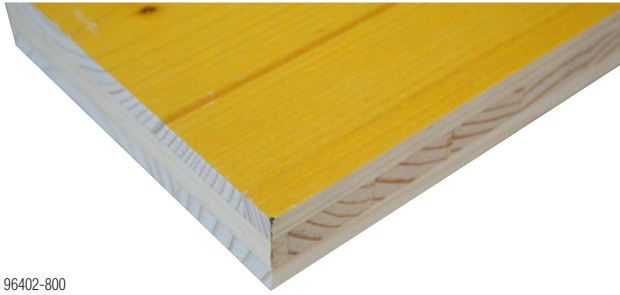
The Doka formwork sheet 3-SO is a quality formwork sheet with selected wood quality that is used both in formwork systems and as loose sheets.

#### Note:

The sheets can be labelled with the client's name if desired.



## Formwork sheet 3S basic



96402-800

The Formwork sheet 3S basic is a three-ply solid-wood sheet with urea-melamine resin coating on both sides to Austrian standard ÖNORM B 3023 in the mid-level quality sector for many different uses on construction sites.

### Sheet structure

- Three-ply solid-wood sheet, spruce.
- The layers are crosswise glue-bonded.
- With/without all-round edge strip.

### Glue-bonding

- Boil-resistant, alkali-resistant, water-resistant and weather-resistant.
- The glue-bonding is compliant with the requirements of Austrian standard ÖNORM B 3023.

### Surfaces

- Both sides urea-melamine resin coating with approx. 130 g per m<sup>2</sup> and side.
- Edge sealing: Emulsion coating.

### Technical data

#### Note:

All values in the tables are based on a sheet moisture content of  $12 \pm 3\%$  on delivery.

Changes in the wood's moisture content can have effects on the weight, dimensions and mechanical properties of the sheet.

The grain of the outside layers of this formwork sheet runs parallel to the longitudinal direction of the sheet.

#### Thickness and weight:

Nominal thickness [mm]	Layers	Weight [kg/m <sup>2</sup> ]
21	3	9.7
27		12.1

#### Formats:

Length [cm]	Width [cm]
150	50
200	
250	
300	100

#### Format tolerances:

	Tolerance
Length/Width	$\pm 1.0$ mm
Perpendicularity	$\pm 1.0$ mm/m
Straightness of sheet edge	$\pm 0.2$ mm/m

#### Mechanical properties (to ÖNORM B 3023):

Nominal thickness [mm]	E <sub>m</sub> [N/mm <sup>2</sup> ]		f <sub>m</sub> [N/mm <sup>2</sup> ]		EI [kNm <sup>2</sup> /m]	
		⊥		⊥		⊥
21	10000	-	22	-	7.82	-
27	10000	-	22	-	15.40	-

E<sub>m</sub> ... mean flexural modulus of elasticity

f<sub>m</sub> ... characteristic flexural stiffness

EI ... Flexural strength

|| ... parallel to the grain

⊥ ... at right angles to the grain

- **Fire behaviour:** D - s2, d0
- **Thermal conductivity:** 0.13 W/mK
- **Formaldehyde class:** E1

### Number of cycles

Possible frequency of use depends on many factors acting on the formwork sheet. Given optimum conditions of use and correct handling, up to **10 use cycles** (guide value) can be achieved.

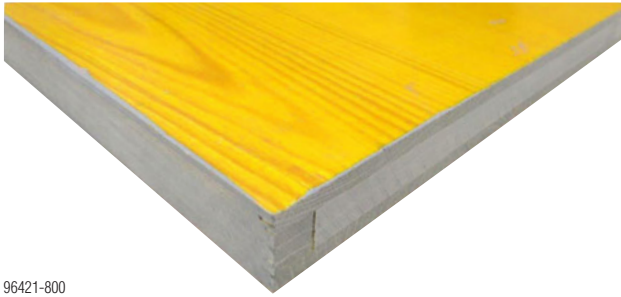
### Type of application and concreting results

The sheet has a 'low-absorbency' surface. Depending on the moisture penetration of the formwork sheet, its surface texture, i.e. the irregularities in the face layer (annual rings, knots, resin pockets, etc.), imprints itself on the concrete, delivering uniform concrete faces with a slight wood texture. The sheets have a tight surface.

#### Note:

The sheets can be labelled with the client's name if desired.

## Formwork sheet 3S top



96421-800

The Formwork sheet 3S top is a high-grade three-ply solid-wood sheet with urea-melamine resin coating on both sides to Austrian standard ÖNORM B 3023 and an extra varnish sealant for increased abrasion resistance and reduced texturing and cracking.

### Sheet structure

- Three-ply solid-wood sheet, spruce.
- The layers are crosswise glue-bonded.
- With all-round edge strip.

### Glue-bonding

- Boil-resistant, alkali-resistant, water-resistant and weather-resistant.
- The glue-bonding is compliant with the requirements of Austrian standard ÖNORM B 3023.

### Surfaces

- Both sides urea melamine-resin coating with approx. 130 g pro per m<sup>2</sup> and side and extra varnish sealant coating sanded with corundum particles.
- Edge sealing: Emulsion coating.

### Technical data

#### Note:

All values in the tables are based on a sheet moisture content of 12 ± 3% on delivery.

Changes in the wood's moisture content can have effects on the weight, dimensions and mechanical properties of the sheet.

The grain of the outside layers of this formwork sheet runs parallel to the longitudinal direction of the sheet.

#### Thickness and weight:

Nominal thickness [mm]	Layers	Weight [kg/m <sup>2</sup> ]
21	3	9.7
27		12.1

#### Formats:

Nominal thickness 21 mm		Nominal thickness 27 mm	
Length [cm]	Width [cm]	Length [cm]	Width [cm]
200	40	200	40
250		250	
200	50	150	50
250		200	
		250	
		300	
		300	100

#### Format tolerances:

	Tolerance
Length/Width	±1.0 mm
Perpendicularity	±1.0 mm/m
Straightness of sheet edge	±0.2 mm/m

#### Mechanical properties (to ÖNORM B 3023):

Nominal thickness [mm]	E <sub>m</sub> [N/mm <sup>2</sup> ]		f <sub>m</sub> [N/mm <sup>2</sup> ]		EI [kNm <sup>2</sup> /m]	
		⊥		⊥		⊥
21	10000	-	22	-	7.82	-
27	10000	-	22	-	15.40	-

E<sub>m</sub> ... mean flexural modulus of elasticity

f<sub>m</sub> ... characteristic flexural stiffness

EI ... Flexural strength

|| ... parallel to the grain

⊥ ... at right angles to the grain

- **Fire behaviour:** D - s2, d0
- **Thermal conductivity:** 0.13 W/mK
- **Formaldehyde class:** E1

### Number of cycles

Possible frequency of use depends on many factors acting on the formwork sheet. Given optimum conditions of use and correct handling, up to **40 use cycles** (guide value) can be achieved.

### Type of application and concreting results

The sheet has a 'low-absorbency' surface. The varnish sealant applied onto the urea melamine resin adhesive provides an additional protective layer. This greatly reduces both moisture pick-up and texturing/cracking, and increases abrasion resistance. The slightly rough surface caused by the projecting corundum particles results in a 'velvety' frosting effect on the concrete.

This high-grade formwork sheet fulfils the requirements for fair-faced concrete and can be used in wall and floor-slab formwork, and slab-formwork systems.

## Formwork sheet 3S cut



96402-800

The Formwork sheet 3S cut is a cost-effective 3-ply sheet for infill zones.

### Sheet structure

- Three-ply solid-wood sheet, spruce.
- The layers are crosswise glue-bonded.

### Glue-bonding

- Boil-resistant, alkali-resistant, water-resistant and weather-resistant.
- The glue-bonding is compliant with the requirements of Austrian standard ÖNORM B 3023.

### Surfaces

- Both sides urea-melamine resin coating with approx. 90 g per m<sup>2</sup> and side.
- No edge sealing.

### Technical data

#### Note:

All values in the tables are based on a sheet moisture content of 12 ± 3% on delivery.

Changes in the wood's moisture content can have effects on the weight, dimensions and mechanical properties of the sheet.

The grain of the outside layers of this formwork sheet runs parallel to the longitudinal direction of the sheet.

#### Thickness and weight:

Nominal thickness [mm]	Layers	Weight [kg/m <sup>2</sup> ]
21	3	9.7
27		12.1

#### Formats:

Length [cm]	Width [cm]
200	50
250	

#### Format tolerances:

	Tolerance
Length/Width	±1.0 mm
Perpendicularity	±1.0 mm/m
Straightness of sheet edge	±0.2 mm/m

- **Fire behaviour:** D - s2, d0
- **Thermal conductivity:** 0.13 W/mK
- **Formaldehyde class:** E1

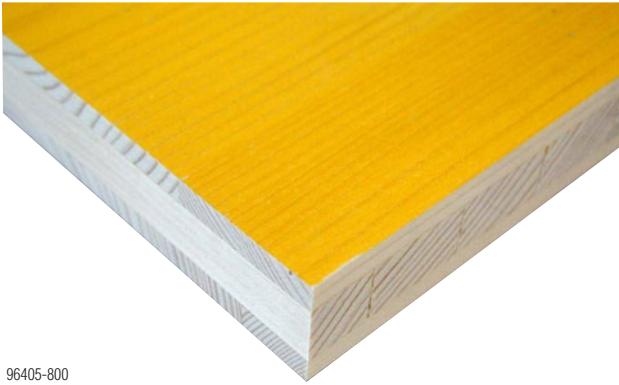
### Number of cycles

Possible frequency of use depends on many factors acting on the formwork sheet. Given optimum conditions of use and correct handling, up to **5 use cycles** (guide value) can be achieved.

### Type of application and concreting results

The Formwork sheet 3S cut allows for economical production of infill zones and box-outs. For once-only uses, therefore, this sheet is ideal for use along with the high-grade Doka formwork sheets. The sheet has a 'low-absorbency' surface.

## Doka formwork sheet FF20



96405-800

The Doka formwork sheet FF20 is a three-ply solid-wood sheet with urea-melamine resin coating on both sides to Austrian standard ÖNORM B 3023, for use in wall formwork systems.

### Sheet structure

- Three-ply solid-wood sheet, spruce.
- The layers are crosswise glue-bonded.
- Without all-round edge strip.

### Glue-bonding

- Boil-resistant, alkali-resistant, water-resistant and weather-resistant.
- The glue-bonding is compliant with the requirements of Austrian standard ÖNORM B 3023.

### Surfaces

- Both sides urea-melamine resin coating with approx. 130 g per m<sup>2</sup> and side.
- Edge sealing: Emulsion coating.

### Technical data

#### Note:

All values in the tables are based on a sheet moisture content of  $12 \pm 3\%$  on delivery.

Changes in the wood's moisture content can have effects on the weight, dimensions and mechanical properties of the sheet.

The grain of the outside layers of this formwork sheet runs parallel to the longitudinal direction of the sheet.

#### Thickness and weight:

Nominal thickness [mm]	Layers	Weight [kg/m <sup>2</sup> ]
21	3	9.7
27		12.1

#### Formats:

Length	Width
System-dependent	

#### Format tolerances:

	Tolerance
Length/Width	$\pm 0.5$ mm
Perpendicularity	$\pm 1.0$ mm/m
Straightness of sheet edge	$\pm 0.2$ mm/m

#### Mechanical properties (to ÖNORM B 3023):

Nominal thickness [mm]	E <sub>m</sub> [N/mm <sup>2</sup> ]		f <sub>m</sub> [N/mm <sup>2</sup> ]		EI [kNm <sup>2</sup> /m]	
		⊥		⊥		⊥
21	10000	-	22	-	7.82	-
27	10000	-	22	-	15.40	-

E<sub>m</sub> ... mean flexural modulus of elasticity

f<sub>m</sub> ... characteristic flexural stiffness

EI ... Flexural strength

|| ... parallel to the grain

⊥ ... at right angles to the grain

- **Fire behaviour:** D - s2, d0
- **Thermal conductivity:** 0.13 W/mK
- **Formaldehyde class:** E1

### Number of cycles

Possible frequency of use depends on many factors acting on the formwork sheet. Given optimum conditions of use and correct handling, up to **25 use cycles** (guide value) can be achieved.

### Type of application and concreting results

The sheet has a 'low-absorbency' surface. Depending on the moisture penetration of the formwork sheet, its surface texture, i.e. the irregularities in the face layer (annual rings, knots etc.), imprints itself on the concrete, delivering uniform concrete faces with a slight wood texture.

This sheet is used in wall formwork systems.

## Three-ply sheet without coating



96411-800

The three-ply sheet without coating can be used for secondary purposes on construction sites.

### Sheet structure

- Three-ply solid-wood sheet, spruce.
- The layers are crosswise glue-bonded.
- Without all-round edge strip.

### Glue-bonding

- Boil-resistant, alkali-resistant, water-resistant and weather-resistant.
- The glue-bonding is compliant with the requirements of Austrian standard ÖNORM B 3023.

### Surfaces

- No coating.
- No edge sealing.

## Technical data

### Note:

All values in the tables are based on a sheet moisture content of  $12 \pm 3\%$  on delivery.

Changes in the wood's moisture content can have effects on the weight, dimensions and mechanical properties of the sheet.

The grain of the outside layers of this formwork sheet runs parallel to the longitudinal direction of the sheet.

### Thickness and weight:

Nominal thickness [mm]	Layers	Weight [kg/m <sup>2</sup> ]
21	3	9.7
27		12.1

### Formats:

Length [cm]	Width [cm]
500	100
600	

### Format tolerances:

	Tolerance
Width	±1.0 mm
Length	±1.5 mm
Perpendicularity	±1.0 mm/m
Straightness of sheet edge	±0.2 mm/m

### Mechanical properties (to ÖNORM B 3023):

Nominal thickness [mm]	E <sub>m</sub> [N/mm <sup>2</sup> ]		f <sub>m</sub> [N/mm <sup>2</sup> ]		EI [kNm <sup>2</sup> /m]	
		⊥		⊥		⊥
21	10000	-	22	-	7.82	-
27	10000	-	22	-	15.40	-

E<sub>m</sub> ... mean flexural modulus of elasticity

f<sub>m</sub> ... characteristic flexural stiffness

EI ... Flexural strength

|| ... parallel to the grain

⊥ ... at right angles to the grain

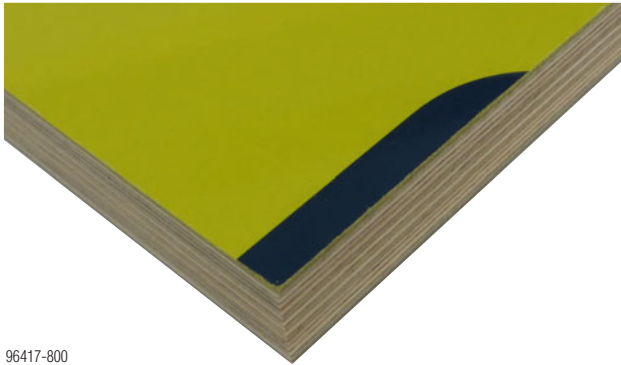
- **Fire behaviour:** D - s2, d0
- **Thermal conductivity:** 0.13 W/mK
- **Formaldehyde class:** E1

## Type of application and concreting results

Usable for secondary purposes on construction sites. Use of the sheet for concrete surfaces without any requirements regarding surface finish is possible.

# Multi-ply formwork sheets

## Xlife sheet Framax



96417-800

The Xlife sheet Framax is a high-grade plastic/wood composite sheet with hard-wearing plastic coating for a significantly longer lifespan and uniform concrete faces over a long time of service.

### Sheet structure

- High-grade plywood sheet made of Scandinavian birchwood.
- The arrangement of the veneers is force-oriented.

### Glue-bonding

- Boil-resistant, alkali-resistant, water-resistant and weather-resistant phenolic-resin glue-bonding.
- The glue-bonding meets the requirements of EN 314-2 Service Class 3, DIN 68705 BFU 100 or BS 6566 WBP.

### Surfaces

- Both sides polypropylene coating.
- Glass-fibre reinforcing on the side facing the concrete.
- Edge sealing: high-grade 2-component edge protection varnish.

### Technical data

#### Note:

All values in the tables are based on a sheet moisture content of  $10 \pm 2\%$  on delivery. Changes in the wood's moisture content can have effects on the weight, dimensions and mechanical properties of the sheet.

The grain of the outside layers of this formwork sheet runs transverse to the longitudinal direction of the sheet.

#### Thickness and weight:

Nominal thickness [mm]	Layers	Weight [kg/m <sup>2</sup> ]
21	13	16.5

#### Formats:

Length	Width
System-dependent	

#### Format tolerances:

	Tolerance
Length/Width	$\pm 0.5$ mm
Perpendicularity	$\pm 0.3$ mm/m
Straightness of sheet edge	$\pm 0.2$ mm/m

#### Mechanical properties:

Nominal thickness [mm]	E <sub>m</sub> [N/mm <sup>2</sup> ]		f <sub>m</sub> [N/mm <sup>2</sup> ]		EI [kNm <sup>2</sup> /m]	
		⊥		⊥		⊥
21	4986	8259	38.5	74.4	3.42	5.67

E<sub>m</sub> ... mean flexural modulus of elasticity

f<sub>m</sub> ... characteristic flexural stiffness

EI ... Flexural strength

|| ... parallel to the grain

⊥ ... at right angles to the grain

- **Fire behaviour:** E
- **Thermal conductivity:** 0.18 W/mK
- **Formaldehyde class:** E1

### Number of cycles

Possible frequency of use depends on many factors acting on the formwork sheet. Given optimum conditions of use and correct handling, up to **350 use cycles** (guide value) in frame formwork can be achieved.

### Type of application and concreting results

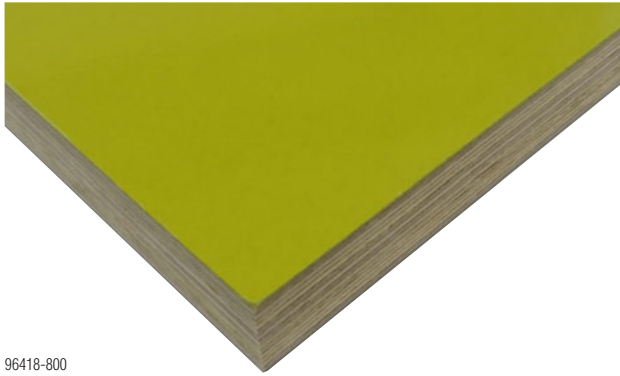
The sheet has a 'non-absorbent' surface. The special plastic coating gives the sheet a significantly longer lifespan.

Advantages: optimum nailability, easy cleaning, no rippling, less prone to mechanical damage. As a result, it delivers a smooth, premium concrete finish even after many repeat uses. To meet stringent specifications regarding the concrete finish, the sheets can also be screwed on from the rear.

The sheet is used in wall formwork systems and as a loose sheet in wall and floor-slab formwork.



## Xlife sheet Alu-Framax



96418-800

The Xlife sheet Alu-Framax is a high-grade plastic/wood composite sheet with hard-wearing plastic coating for a significantly longer lifespan and uniform concrete faces over a long time of service.

### Sheet structure

- High-grade plywood sheet made of Scandinavian birchwood and spruce.
- The arrangement of the veneers is force-oriented.

### Glue-bonding

- Boil-resistant, alkali-resistant, water-resistant and weather-resistant phenolic-resin glue-bonding.
- The glue-bonding meets the requirements of EN 314-2 Service Class 3, DIN 68705 BFU 100 or BS 6566 WBP.

### Surfaces

- Both sides polypropylene coating.
- Glass-fibre reinforcing on the side facing the concrete.
- Edge sealing: high-grade 2-component edge protection varnish.

## Technical data

### Note:

All values in the tables are based on a sheet moisture content of  $10 \pm 2\%$  on delivery.

Changes in the wood's moisture content can have effects on the weight, dimensions and mechanical properties of the sheet.

The grain of the outside layers of this formwork sheet runs transverse to the longitudinal direction of the sheet.

### Thickness and weight:

Nominal thickness [mm]	Layers	Weight [kg/m <sup>2</sup> ]
21	13	14.0

### Formats:

Length	Width
System-dependent	

### Format tolerances:

	Tolerance
Length/Width	$\pm 0.5$ mm
Perpendicularity	$\pm 0.3$ mm/m
Straightness of sheet edge	$\pm 0.2$ mm/m

### Mechanical properties:

Nominal thickness [mm]	E <sub>m</sub> [N/mm <sup>2</sup> ]		f <sub>m</sub> [N/mm <sup>2</sup> ]		EI [kNm <sup>2</sup> /m]	
		⊥		⊥		⊥
21	3847	7072	33.2	67.1	2.64	4.86

E<sub>m</sub> ... mean flexural modulus of elasticity

f<sub>m</sub> ... characteristic flexural stiffness

EI ... Flexural strength

|| ... parallel to the grain

⊥ ... at right angles to the grain

- **Fire behaviour:** E
- **Thermal conductivity:** 0.15 W/mK
- **Formaldehyde class:** E1

## Number of cycles

Possible frequency of use depends on many factors acting on the formwork sheet. Given optimum conditions of use and correct handling, up to **350 use cycles** (guide value) in frame formwork can be achieved.

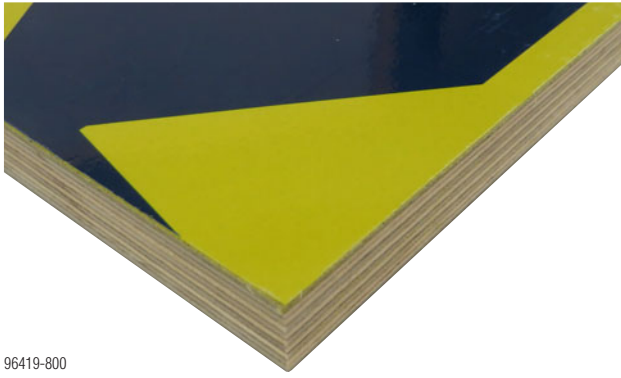
## Type of application and concreting results

The sheet has a 'non-absorbent' surface. The special plastic coating gives the sheet a significantly longer lifespan.

Advantages: optimum nailability, easy cleaning, no rippling, less prone to mechanical damage. As a result, it delivers a smooth, premium concrete finish even after many repeat uses.

This sheet is used in wall formwork systems.

## Xlife sheet Frami



96419-800

The Xlife sheet Frami is a high-grade plastic/wood composite sheet with hard-wearing plastic coating for a significantly longer lifespan and uniform concrete faces over a long time of service.

### Sheet structure

- High-grade plywood sheet made of Scandinavian birchwood.
- The arrangement of the veneers is force-oriented.

### Glue-bonding

- Boil-resistant, alkali-resistant, water-resistant and weather-resistant phenolic-resin glue-bonding.
- The glue-bonding meets the requirements of EN 314-2 Service Class 3, DIN 68705 BFU 100 or BS 6566 WBP.

### Surfaces

- Both sides polypropylene coating.
- Glass-fibre reinforcing on the side facing the concrete.
- Edge sealing: high-grade 2-component edge protection varnish.

## Technical data

### Note:

All values in the tables are based on a sheet moisture content of  $10 \pm 2\%$  on delivery.

Changes in the wood's moisture content can have effects on the weight, dimensions and mechanical properties of the sheet.

The grain of the outside layers of this formwork sheet runs parallel to the longitudinal direction of the sheet.

### Thickness and weight:

Nominal thickness [mm]	Layers	Weight [kg/m <sup>2</sup> ]
15	9	11.2

### Formats:

Length	Width
System-dependent	

### Format tolerances:

	Tolerance
Length/Width	$\pm 0.5$ mm
Perpendicularity	$\pm 0.3$ mm/m
Straightness of sheet edge	$\pm 0.2$ mm/m

### Mechanical properties:

Nominal thickness [mm]	E <sub>m</sub> [N/mm <sup>2</sup> ]		f <sub>m</sub> [N/mm <sup>2</sup> ]		EI [kNm <sup>2</sup> /m]	
		⊥		⊥		⊥
15	8748	3056	84.5	38.1	2.27	0.79

E<sub>m</sub> ... mean flexural modulus of elasticity

f<sub>m</sub> ... characteristic flexural stiffness

EI ... Flexural strength

|| ... parallel to the grain

⊥ ... at right angles to the grain

- **Fire behaviour:** E
- **Thermal conductivity:** 0.18 W/mK
- **Formaldehyde class:** E1

## Number of cycles

Possible frequency of use depends on many factors acting on the formwork sheet. Given optimum conditions of use and correct handling, up to **350 use cycles** (guide value) in frame formwork can be achieved.

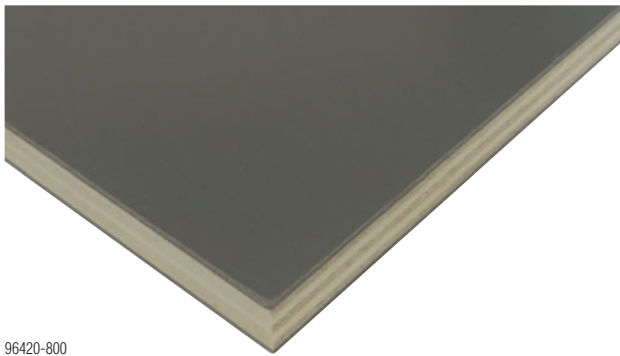
## Type of application and concreting results

The sheet has a 'non-absorbent' surface. The special plastic coating gives the sheet a significantly longer lifespan.

Advantages: optimum nailability, easy cleaning, no rippling, less prone to mechanical damage. As a result, it delivers a smooth, premium concrete finish even after many repeat uses.

This sheet is used in wall formwork systems.

## Xlife sheet Dokadek



96420-800

The Xlife sheet Dokadek is a high-grade plastic/wood composite sheet with hard-wearing plastic coating for a significantly longer lifespan and uniform concrete faces over a long time of service.

### Sheet structure

- High-grade plywood sheet made of Scandinavian birchwood and spruce.
- The arrangement of the veneers is crosswise.

### Glue-bonding

- Boil-resistant, alkali-resistant, water-resistant and weather-resistant phenolic-resin glue-bonding.
- The glue-bonding meets the requirements of EN 314-2 Service Class 3, DIN 68705 BFU 100 or BS 6566 WBP.

### Surfaces

- Both sides glass-fibre-reinforced polypropylene coating.
- Edge sealing: high-grade 2-component edge protection varnish.

### Technical data

#### Note:

All values in the tables are based on a sheet moisture content of  $10 \pm 2\%$  on delivery.

Changes in the wood's moisture content can have effects on the weight, dimensions and mechanical properties of the sheet.

The grain of the outside layers of this formwork sheet runs transverse to the longitudinal direction of the sheet.

#### Thickness and weight:

Nominal thickness [mm]	Layers	Weight [kg/m <sup>2</sup> ]
12	5	8.2

#### Formats:

Length	Width
System-dependent	

#### Format tolerances:

	Tolerance
Length/Width	$\pm 0.5$ mm
Perpendicularity	$\pm 0.3$ mm/m
Straightness of sheet edge	$\pm 0.2$ mm/m

#### Mechanical properties:

Nominal thickness [mm]	E <sub>m</sub> [N/mm <sup>2</sup> ]		f <sub>m</sub> [N/mm <sup>2</sup> ]		EI [kNm <sup>2</sup> /m]	
		⊥		⊥		⊥
12	5139	6210	56.0	45.0	0.76	0.92

E<sub>m</sub> ... mean flexural modulus of elasticity

f<sub>m</sub> ... characteristic flexural stiffness

EI ... Flexural strength

|| ... parallel to the grain

⊥ ... at right angles to the grain

- **Fire behaviour:** E
- **Thermal conductivity:** 0.12 W/mK
- **Formaldehyde class:** E1

### Number of cycles

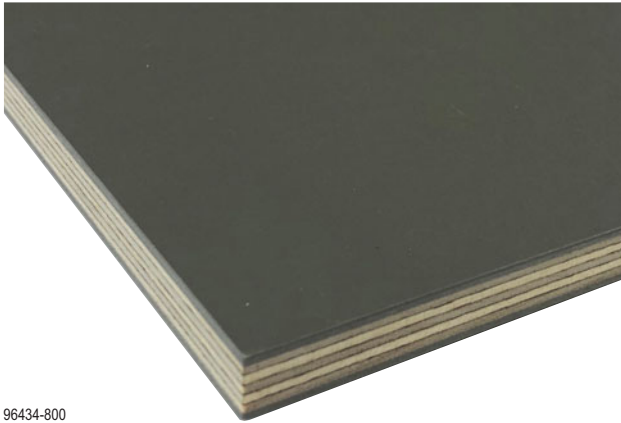
Possible frequency of use depends on many factors acting on the formwork sheet. Given optimum conditions of use and correct handling, up to **150 use cycles** (guide value) in frame formwork can be achieved.

### Type of application and concreting results

The sheet has a 'non-absorbent' surface. The special plastic coating gives the sheet a significantly longer lifespan. Advantages: optimum nailability, easy cleaning, no rippling, less prone to mechanical damage. As a result, it delivers a smooth, premium concrete finish even after many repeat uses.

This sheet is used in slab formwork systems.

## Xlife sheet DokaXlight



96434-800

The Xlife sheet DokaXlight is a high-grade plastic/wood composite sheet with hard-wearing plastic coating for a significantly longer lifespan and uniform concrete faces over a long time of service.

### Sheet structure

- High-grade plywood sheet made of Scandinavian birchwood.
- The arrangement of the veneers is crosswise.

### Glue-bonding

- Boil-resistant, alkali-resistant, water-resistant and weather-resistant phenolic-resin glue-bonding.
- The glue-bonding meets the requirements of EN 314-2 Service Class 3, DIN 68705 BFU 100 or BS 6566 WBP.

### Surfaces

- Both sides glass-fibre-reinforced polypropylene coating.
- Edge sealing: high-grade 2-component edge protection varnish.

## Technical data

### Note:

All values in the tables are based on a sheet moisture content of  $10 \pm 2\%$  on delivery.

Changes in the wood's moisture content can have effects on the weight, dimensions and mechanical properties of the sheet.

The grain of the outside layers of this formwork sheet runs transverse to the longitudinal direction of the sheet.

### Thickness and weight:

Nominal thickness [mm]	Layers	Weight [kg/m <sup>2</sup> ]
9	5	7.8

### Formats:

Length	Width
System-dependent	

### Format tolerances:

	Tolerance
Length/Width	$\pm 0.5$ mm
Perpendicularity	$\pm 0.3$ mm/m
Straightness of sheet edge	$\pm 0.3$ mm/m

### Mechanical properties:

Nominal thickness [mm]	E <sub>m</sub> [N/mm <sup>2</sup> ]		f <sub>m</sub> [N/mm <sup>2</sup> ]		EI [kNm <sup>2</sup> /m]	
		⊥		⊥		⊥
9	6548	6955	95.0	106.0	0.40	0.42

E<sub>m</sub> ... mean flexural modulus of elasticity

f<sub>m</sub> ... characteristic flexural stiffness

EI ... Flexural strength

|| ... parallel to the grain

⊥ ... at right angles to the grain

- **Fire behaviour:** E
- **Thermal conductivity:** 0.16 W/mK
- **Formaldehyde class:** E1

## Number of cycles

Possible frequency of use depends on many factors acting on the formwork sheet. Given optimum conditions of use and correct handling, up to **200 use cycles** (guide value) in frame formwork can be achieved.

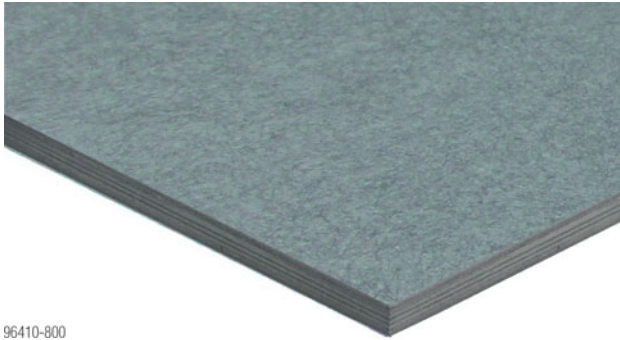
## Type of application and concreting results

The sheet has a 'non-absorbent' surface. The special plastic coating gives the sheet a significantly longer lifespan.

Advantages: optimum nailability, easy cleaning, no rippling, less prone to mechanical damage. As a result, it delivers a smooth, premium concrete finish even after many repeat uses.

This sheet is used in wall formwork systems.

## Xface sheet



96410-800

The Xface sheet is a large-format birchwood plywood sheet with extremely hard-wearing coating for high fair-faced concrete requirements in wall and slab construction or high requirements in terms of durability for high number of use cycles.

### Sheet structure

- High-grade plywood sheet made of Scandinavian birchwood.
- The arrangement of the veneers is crosswise.

### Glue-bonding

- Boil-resistant, alkali-resistant, water-resistant and weather-resistant phenolic-resin glue-bonding.
- The glue-bonding meets the requirements of EN 314-2 Service Class 3, DIN 68705 BFU 100 or BS 6566 WBP.

### Surfaces

- Side facing the concrete: fibre-reinforced synthetic-resin coating
- Back: Phenolic-resin film coating with 120 g/m<sup>2</sup>.
- Edge sealing: high-grade 2-component edge protection varnish.

### Technical data

#### Note:

All values in the tables are based on a sheet moisture content of 10 ± 2% on delivery. Changes in the wood's moisture content can have effects on the weight, dimensions and mechanical properties of the sheet.

The grain of the outside layers of this formwork sheet runs transverse to the longitudinal direction of the sheet.

#### Thickness and weight:

Nominal thickness [mm]	Layers	Weight [kg/m <sup>2</sup> ]
21	15	15.0

#### Formats:

Length [cm]	Width [cm]
202	302
	402
	502

#### Format tolerances:

	Tolerance
Length/Width	±1.5 mm
Perpendicularity	±0.5 mm/m
Straightness of sheet edge	±0.2 mm/m

#### Mechanical properties

(as per Handbook of Finnish Plywood):

Nominal thickness [mm]	E <sub>m</sub> [N/mm <sup>2</sup> ]		f <sub>m</sub> [N/mm <sup>2</sup> ]		EI [kNm <sup>2</sup> /m]	
		⊥		⊥		⊥
21	9858	7642	39.4	34.3	6.97	5.40

E<sub>m</sub> ... mean flexural modulus of elasticity

f<sub>m</sub> ... characteristic flexural stiffness

EI ... Flexural strength

|| ... parallel to the grain

⊥ ... at right angles to the grain

- **Fire behaviour:** D - s2, d0
- **Thermal conductivity:** 0.17 W/mK
- **Formaldehyde class:** E1

### Number of cycles

Possible frequency of use depends on many factors acting on the formwork sheet. Given optimum conditions of use and correct handling, up to **100 use cycles** (up to 40 use cycles for fair-faced concrete) (guide value) can be achieved.

It is also possible to carry out the first few cycles **without application of a release agent**.

### Type of application and concreting results

The sheet has a 'non-absorbent' surface. The extra-hard-wearing coating of the Xface sheets, and the large sheet formats, make it possible to achieve a smooth, uniform concrete surface with only a small number of joints.

The sheets permit easy nailing, screwing and drilling, and have a 2 cm oversize which optimises them for further trimming.

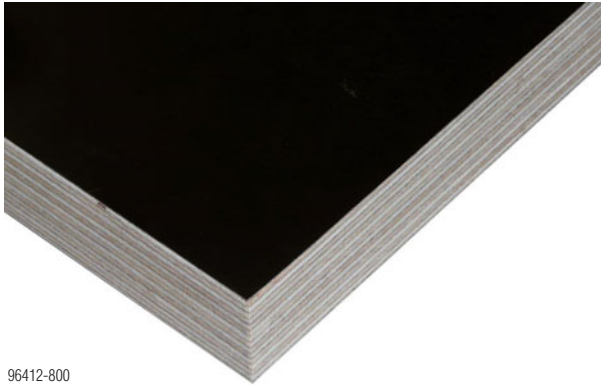
The excellent release properties of the sheet surface mean that for the first few re-use cycles, no concrete release agent is needed.

The synthetic-resin coating is free of phenolic resin. Consequently, there is no staining of the concrete.

The sheet for high fair-face concrete specifications is used in wall and floor-slab formwork.



## Framax sheet



96412-800

The Framax sheet is a high-grade birchwood-veneer plywood sheet with film coating on both sides, for use in wall formwork systems.

### Sheet structure

- Film-coated plywood sheet made of Scandinavian birchwood.
- The arrangement of the veneers is crosswise.

### Glue-bonding

- Boil-resistant, alkali-resistant, water-resistant and weather-resistant phenolic-resin glue-bonding.
- The glue-bonding meets the requirements of EN 314-2 Service Class 3, DIN 68705 BFU 100 or BS 6566 WBP.

### Surfaces

- Both sides phenolic-resin film coating with 220 g per m<sup>2</sup> and side.
- Edge sealing: high-grade 2-component edge protection varnish.

### Technical data

#### Note:

All values in the tables are based on a sheet moisture content of 10 ± 2% on delivery.

Changes in the wood's moisture content can have effects on the weight, dimensions and mechanical properties of the sheet.

The grain of the outside layers of this formwork sheet runs transverse to the longitudinal direction of the sheet.

#### Thickness and weight:

Nominal thickness [mm]	Layers	Weight [kg/m <sup>2</sup> ]
21	15	14.3

#### Formats:

Length	Width
System-dependent	

#### Format tolerances:

	Tolerance
Length/Width	+ 0 / - 1,0 mm
Perpendicularity	±0.3 mm/m
Straightness of sheet edge	±0.2 mm/m

#### Mechanical properties

(as per Handbook of Finnish Plywood):

Nominal thickness [mm]	E <sub>m</sub> [N/mm <sup>2</sup> ]		f <sub>m</sub> [N/mm <sup>2</sup> ]		EI [kNm <sup>2</sup> /m]	
		⊥		⊥		⊥
21	9858	7642	39.4	34.3	6.97	5.40

E<sub>m</sub> ... mean flexural modulus of elasticity

f<sub>m</sub> ... characteristic flexural stiffness

EI ... Flexural strength

|| ... parallel to the grain

⊥ ... at right angles to the grain

- Fire behaviour:** D - s2, d0
- Thermal conductivity:** 0.17 W/mK
- Formaldehyde class:** E1

### Number of cycles

Possible frequency of use depends on many factors acting on the formwork sheet. Given optimum conditions of use and correct handling, up to **80 use cycles** (guide value) in frame formwork can be achieved.

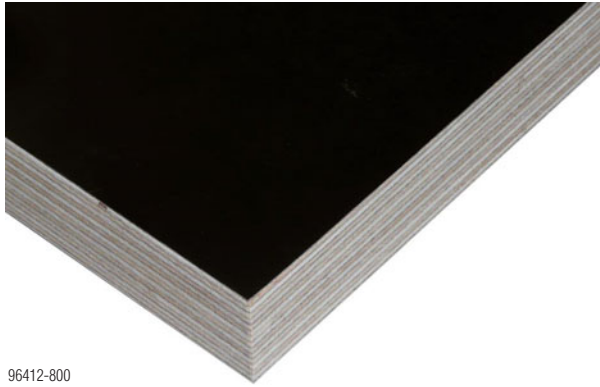
### Type of application and concreting results

The sheet has a 'low-absorbency' surface. The surface consists of a selected face veneer and a high-grade, wear-resistant film coating. As a result, it delivers a smooth concrete finish even after many repeat uses. To meet stringent specifications regarding the concrete finish, the sheets are screwed on from the rear. Sealing any nailing-points, holes, damage etc. can prolong the lifespan of the formwork sheet.

This sheet is used in wall formwork systems.



## Frami sheet



96412-800

**The Frami sheet is a high-grade birchwood-veneer plywood sheet with film coating on both sides, for use in wall formwork systems.**

### Sheet structure

- Film-coated plywood sheet made of Scandinavian birchwood.
- The arrangement of the veneers is crosswise (as of a panel height of 2.70 m the arrangement is force-oriented).

### Glue-bonding

- Boil-resistant, alkali-resistant, water-resistant and weather-resistant phenolic-resin glue-bonding.
- The glue-bonding meets the requirements of EN 314-2 Service Class 3, DIN 68705 BFU 100 or BS 6566 WBP.

### Surfaces

- Both sides phenolic-resin film coating with 220 g per m<sup>2</sup> and side.
- Edge sealing: high-grade 2-component edge protection varnish.

### Technical data

#### Note:

All values in the tables are based on a sheet moisture content of  $10 \pm 2\%$  on delivery.

Changes in the wood's moisture content can have effects on the weight, dimensions and mechanical properties of the sheet.

The grain of the outside layers of this formwork sheet runs transverse to the longitudinal direction of the sheet.

#### Thickness and weight:

Nominal thickness [mm]	Layers	Weight [kg/m <sup>2</sup> ]
15	11	10.2

#### Formats:

Length	Width
System-dependent	

#### Format tolerances:

	Tolerance
Length/Width	+ 0 / - 1,0 mm
Perpendicularity	±0.3 mm/m
Straightness of sheet edge	±0.2 mm/m

#### Mechanical properties

(as per Handbook of Finnish Plywood):

Nominal thickness [mm]	E <sub>m</sub> [N/mm <sup>2</sup> ]		f <sub>m</sub> [N/mm <sup>2</sup> ]		EI [kNm <sup>2</sup> /m]	
		⊥		⊥		⊥
15	10316	7184	41.3	33.8	2.78	1.94
15 (force-oriented)	6500	9490	-	-	1.90	2.80

E<sub>m</sub> ... mean flexural modulus of elasticity

f<sub>m</sub> ... characteristic flexural stiffness

EI ... Flexural strength

|| ... parallel to the grain

⊥ ... at right angles to the grain

- **Fire behaviour:** E
- **Thermal conductivity:** 0.17 W/mK
- **Formaldehyde class:** E1

### Number of cycles

Possible frequency of use depends on many factors acting on the formwork sheet. Given optimum conditions of use and correct handling, up to **80 use cycles** (guide value) in frame formwork can be achieved.

### Type of application and concreting results

The sheet has a 'low-absorbency' surface. The surface consists of a selected face veneer and a high-grade, wear-resistant film coating. As a result, it delivers a smooth concrete finish even after many repeat uses. To meet stringent specifications regarding the concrete finish, the sheets are screwed on from the rear. Sealing any nailing-points, holes, damage etc. can prolong the lifespan of the formwork sheet.

This sheet is used in wall formwork systems.

# Dokaplex formwork sheet



96404-800

The Dokaplex formwork sheet is a high-grade birchwood-veneer plywood sheet with film coating on both sides, for horizontal and vertical formwork applications.

## Sheet structure

- Film-coated plywood sheet made of Scandinavian birchwood.
- The arrangement of the veneers is crosswise.

## Glue-bonding

- Boil-resistant, alkali-resistant, water-resistant and weather-resistant phenolic-resin glue-bonding.
- The glue-bonding meets the requirements of EN 314-2 Service Class 3, DIN 68705 BFU 100 or BS 6566 WBP.

## Surfaces

- Both sides phenolic-resin film coating with 120 g (4 and 9 mm) or 220 g (18 and 21 mm) per m<sup>2</sup> and side.
- Edge sealing: Emulsion coating.

## Technical data

### Note:

All values in the tables are based on a sheet moisture content of 10 ± 2% on delivery.

Changes in the wood's moisture content can have effects on the weight, dimensions and mechanical properties of the sheet.

The grain of the outside layers of this formwork sheet runs transverse to the longitudinal direction of the sheet.

### Thicknesses, weights and formats:

Nominal thickness [mm]	Layers	Weight [kg/m <sup>2</sup> ]	Format [cm]
4	3	2.7	150 x 300
9	7	6.1	150 x 250 150 x 300
18	13	12.2	150 x 250 150 x 300
21	15	14.3	125 x 250 127 x 252 152 x 252 150 x 250 150 x 300

### Format tolerances:

	Tolerance
Length/Width	±1.5 mm
Perpendicularity	±0.5 mm/m
Straightness of sheet edge	±0.3 mm

### Mechanical properties

(as per Handbook of Finnish Plywood):

Nominal thickness [mm]	E <sub>m</sub> [N/mm <sup>2</sup> ]		f <sub>m</sub> [N/mm <sup>2</sup> ]		EI [kNm <sup>2</sup> /m]	
		⊥		⊥		⊥
4	16471	1029	65.9	10.6	0.06	0.004
9	11395	6105	45.6	32.1	0.73	0.39
18	10048	7452	40.2	34.1	4.56	3.38
21	9858	7642	39.4	34.3	6.97	5.40

E<sub>m</sub> ... mean flexural modulus of elasticity

f<sub>m</sub> ... characteristic flexural stiffness

EI ... Flexural strength

|| ... parallel to the grain

⊥ ... at right angles to the grain

- Fire behaviour** (18 mm thick or thicker): D-s2, d0
- Thermal conductivity:** 0.17 W/mK
- Formaldehyde class:** E1

## Number of cycles

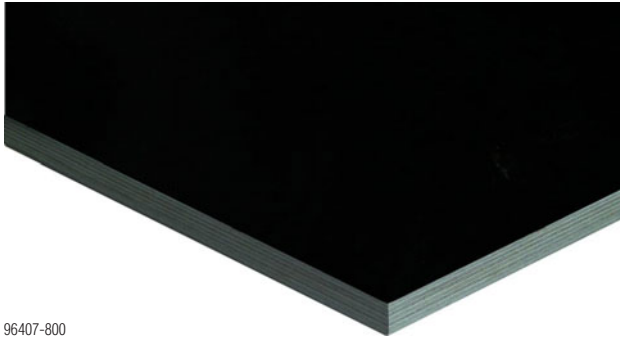
Possible frequency of use depends on many factors acting on the formwork sheet. Given optimum conditions of use and correct handling, with sheets 18 mm thick up to **50 use cycles** (guide value) can be achieved.

## Type of application and concreting results

The sheet has a 'low-absorbency' surface. The surface consists of a selected face veneer and a high-grade, wear-resistant film coating. As a result, it delivers a smooth concrete finish even after many repeat uses. To meet stringent specifications regarding the concrete finish, the sheets are screwed on from the rear. Sealing any nailing-points, holes, damage etc. can prolong the lifespan of the formwork sheet.

The sheet is used in wall and floor-slab formwork.

## DokaPly Birch



96407-800

**DokaPly Birch is a birchwood-veneer plywood sheet with film coating on both sides, for horizontal and vertical formwork applications.**

### Sheet structure

- Film-coated plywood sheet made of Scandinavian birchwood.
- The arrangement of the veneers is crosswise.

### Glue-bonding

- Boil-resistant, alkali-resistant, water-resistant and weather-resistant phenolic-resin glue-bonding.
- The glue-bonding meets the requirements of EN 314-2 Service Class 3, DIN 68705 BFU 100 or BS 6566 WBP.

### Surfaces

- Both sides phenolic-resin film coating with 120 g (SC) or 220 g (DC) per m<sup>2</sup> and side.
- Edge sealing: Acrylic-resin varnish.

## Technical data

### Note:

All values in the tables are based on a sheet moisture content of  $10 \pm 2\%$  on delivery.

Changes in the wood's moisture content can have effects on the weight, dimensions and mechanical properties of the sheet.

The grain of the outside layers of this formwork sheet runs transverse to the longitudinal direction of the sheet.

### Thicknesses, weights and formats:

Nominal thickness [mm]	Layers	Weight [kg/m <sup>2</sup> ]	Format [cm]
9	7	6.1	125 x 250
12	9	8.2	125 x 250 150 x 300
15	11	10.2	125 x 250
18	13	12.2	62.5 x 250 125 x 250 122 x 244 150 x 300
21	15	14.3	62.5 x 250 125 x 250 122 x 244 150 x 300

### Format tolerances:

	Tolerance
Length/Width	$\pm 3.5$ mm (as per EN 315)
Perpendicularity	$\pm 1.0$ mm/m
Straightness of sheet edge	$\pm 1.0$ mm/m

### Mechanical properties (as per Handbook of Finnish Plywood):

Nominal thickness [mm]	E <sub>m</sub> [N/mm <sup>2</sup> ]		f <sub>m</sub> [N/mm <sup>2</sup> ]		EI [kNm <sup>2</sup> /m]	
		⊥		⊥		⊥
9	11395	6105	45.6	32.1	0.73	0.39
12	10719	6781	42.9	33.2	1.54	0.98
15	10316	7184	41.3	33.8	2.79	1.94
18	10048	7452	40.2	34.1	4.56	3.38
21	9858	7642	39.4	34.3	6.97	5.40

E<sub>m</sub> ... mean flexural modulus of elasticity

f<sub>m</sub> ... characteristic flexural stiffness

EI ... Flexural strength

|| ... parallel to the grain

⊥ ... at right angles to the grain

- **Fire behaviour** (18 mm thick or thicker): D - s2, d0
- **Thermal conductivity:** 0.17 W/mK
- **Formaldehyde class:** E1

## Number of cycles

Possible frequency of use depends on many factors acting on the formwork sheet. Given optimum conditions of use and correct handling, with sheets 18 mm thick up to **30 (SC) or 50 (DC) use cycles** (guide value) can be achieved.

# DokaPly Birch plus

DokaPly Birch plus is a birchwood-veneer plywood sheet with film coating on both sides, including a Doka layout, for horizontal and vertical formwork applications.

## Sheet structure

- Film-coated plywood sheet made of Scandinavian birchwood.
- The arrangement of the veneers is crosswise.

## Glue-bonding

- Boil-resistant, alkali-resistant, water-resistant and weather-resistant phenolic-resin glue-bonding.
- The glue-bonding meets the requirements of EN 314-2 Service Class 3, DIN 68705 BFU 100 or BS 6566 WBP.

## Surfaces

- Both sides phenolic-melamine-resin film coating with 120 g (120 EXT) or 220-240 g (220-240 EXT) per m<sup>2</sup> and side.
- Edge sealing: Acrylic-resin varnish.

## Technical data

### Note:

All values in the tables are based on a sheet moisture content of  $10 \pm 2\%$  on delivery.

Changes in the wood's moisture content can have effects on the weight, dimensions and mechanical properties of the sheet.

The grain of the outside layers of this formwork sheet runs transverse to the longitudinal direction of the sheet.

### Thicknesses, weights and formats:

Nominal thickness [mm]	Layers	Weight [kg/m <sup>2</sup> ]	Format [cm]
9	7	6.1	125 x 250
12	9	8.2	125 x 250 150 x 300
15	11	10.2	125 x 250
18	13	12.2	62.5 x 250 125 x 250 122 x 244 150 x 300
21	15	14.3	62.5 x 250 125 x 250 122 x 244 150 x 300

### Format tolerances:

	Tolerance
Length/Width	$\pm 3.5$ mm (as per EN 315)
Perpendicularity	$\pm 1.0$ mm/m
Straightness of sheet edge	$\pm 1.0$ mm/m

### Mechanical properties (as per Handbook of Finnish Plywood):

Nominal thickness [mm]	E <sub>m</sub> [N/mm <sup>2</sup> ]		f <sub>m</sub> [N/mm <sup>2</sup> ]		EI [kNm <sup>2</sup> /m]	
		⊥		⊥		⊥
9	11395	6105	45.6	32.1	0.73	0.39
12	10719	6781	42.9	33.2	1.54	0.98
15	10316	7184	41.3	33.8	2.79	1.94
18	10048	7452	40.2	34.1	4.56	3.38
21	9858	7642	39.4	34.3	6.97	5.40

E<sub>m</sub> ... mean flexural modulus of elasticity

f<sub>m</sub> ... characteristic flexural stiffness

EI ... Flexural strength

|| ... parallel to the grain

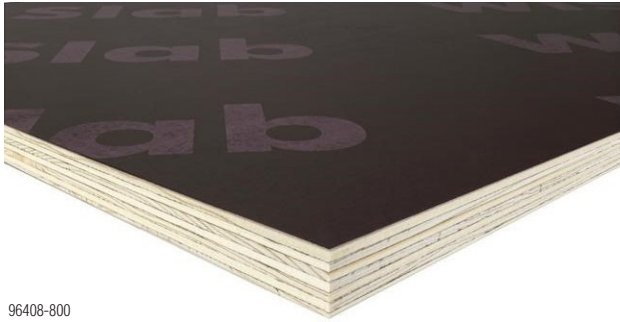
⊥ ... at right angles to the grain

- Fire behaviour** (18 mm thick or thicker): D - s2, d0
- Thermal conductivity:** 0.17 W/mK
- Formaldehyde class:** E1

## Number of cycles

Possible frequency of use depends on many factors acting on the formwork sheet. Given optimum conditions of use and correct handling, with sheets 18 mm thick up to **30** (120 EXT) or **50** (220-240 EXT) **use cycles** (guide value) can be achieved.

# DokaPly Spruce



**DokaPly Spruce is a spruce-veneer plywood sheet with film coating on both sides for primarily horizontal formwork applications**

## Sheet structure

- Film-coated plywood sheet made of Scandinavian spruce.
- The arrangement of the veneers is crosswise.

## Glue-bonding

- Boil-resistant, alkali-resistant, water-resistant and weather-resistant phenolic-resin glue-bonding.
- The glue-bonding meets the requirements of EN 314-2 Service Class 3, DIN 68705 BFU 100 or BS 6566 WBP.

## Surfaces

- Both sides phenolic-resin film coating with 400 g per m<sup>2</sup> and side.
- Edge sealing: Acrylic-resin varnish.

## Technical data

### Note:

All values in the tables are based on a sheet moisture content of  $10 \pm 2\%$  on delivery.

Changes in the wood's moisture content can have effects on the weight, dimensions and mechanical properties of the sheet.

The grain of the outside layers of this formwork sheet runs parallel to the longitudinal direction of the sheet.

### Thickness and weight:

Nominal thickness [mm]	Layers	Weight [kg/m <sup>2</sup> ]
18	7	9.0
21		10.2

### Formats:

Length [cm]	Width [cm]
250	125

### Format tolerances:

	Tolerance
Width	$\pm 2.0$ mm
Length	$\pm 3.0$ mm
Perpendicularity	$\pm 1.0$ mm/m
Straightness of sheet edge	$\pm 1.0$ mm/m

### Mechanical properties:

Nominal thickness [mm]	E <sub>m</sub> [N/mm <sup>2</sup> ]		f <sub>m</sub> [N/mm <sup>2</sup> ]		EI [kNm <sup>2</sup> /m]	
		⊥		⊥		⊥
18	8170	3830	20.4	13.0	3.40	1.60
21	7547	4453	18.9	14.3	5.03	2.97

E<sub>m</sub> ... mean flexural modulus of elasticity

f<sub>m</sub> ... characteristic flexural stiffness

EI ... Flexural strength

|| ... parallel to the grain

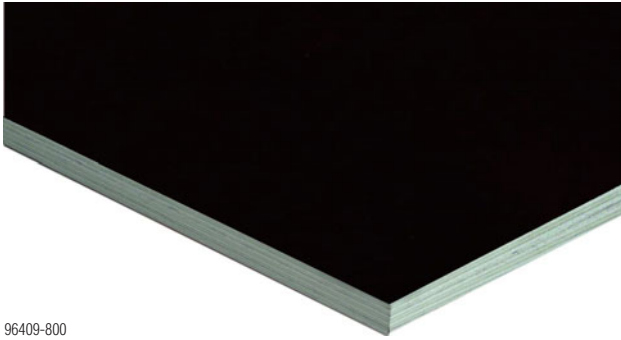
⊥ ... at right angles to the grain

- **Fire behaviour:** D - s2, d0
- **Thermal conductivity:** 0.13 W/mK
- **Formaldehyde class:** E1

## Number of cycles

Possible frequency of use depends on many factors acting on the formwork sheet. Given optimum conditions of use and correct handling, up to **10 use cycles** (guide value) can be achieved.

## DokaPly eco



96409-800

**DokaPly eco is a solid plywood sheet made of European poplar with film coating on both sides for horizontal and vertical formwork applications.**

### Sheet structure

- Film-coated plywood sheet made of European poplar.
- The arrangement of the veneers is crosswise.

### Glue-bonding

- Boil-resistant, alkali-resistant, water-resistant and weather-resistant phenolic-resin glue-bonding.
- The glue-bonding meets the requirements of EN 314-2 Service Class 3.

### Surfaces

- Both sides phenolic-resin film coating with 120 g per m<sup>2</sup> and side.
- Edge sealing: Acrylic-resin varnish.

### Technical data

#### Note:

All values in the tables are based on a sheet moisture content of  $10 \pm 2\%$  on delivery.

Changes in the wood's moisture content can have effects on the weight, dimensions and mechanical properties of the sheet.

The grain of the outside layers of this formwork sheet runs parallel to the longitudinal direction of the sheet.

#### Thickness and weight:

Nominal thickness [mm]	Layers	Weight [kg/m <sup>2</sup> ]
18	9	9.0
21	11	10.5

#### Formats:

Length [cm]	Width [cm]
250	62.5
	125

#### Format tolerances:

	Tolerance
Length/Width	$\pm 3.5$ mm
Perpendicularity	$\pm 1.0$ mm/m
Straightness of sheet edge	$\pm 1.0$ mm/m

#### Mechanical properties:

Nominal thickness [mm]	E <sub>m</sub> [N/mm <sup>2</sup> ]		f <sub>m</sub> [N/mm <sup>2</sup> ]		EI [kNm <sup>2</sup> /m]	
		⊥		⊥		⊥
18	3330	1946	31.0	29.7	1.62	0.95
21	4197	1943	31.3	23.3	3.24	1.50

E<sub>m</sub> ... mean flexural modulus of elasticity

f<sub>m</sub> ... characteristic flexural stiffness

EI ... Flexural strength

|| ... parallel to the grain

⊥ ... at right angles to the grain

- **Fire behaviour:** D - s2, d0
- **Thermal conductivity:** 0.13 W/mK
- **Formaldehyde class:** E1

### Number of cycles

Possible frequency of use depends on many factors acting on the formwork sheet. Given optimum conditions of use and correct handling, up to **15 use cycles** (guide value) can be achieved.



## DokaPly natural



96415-800

**DokaPly natural is an uncoated plywood sheet for subordinate purposes and for cuttings.**

### Sheet structure

- Uncoated plywood sheet made of South American fir.
- The arrangement of the veneers is crosswise.

### Glue-bonding

The glue-bonding meets the requirements of EN 314-2 Service Class 2.

### Surfaces

- No coating.
- No edge sealing.

### Technical data

#### Note:

Changes in the wood's moisture content can have effects on the weight, dimensions and mechanical properties of the sheet.

#### Thickness and weight:

Nominal thickness [mm]	Layers	Weight [kg/m²]
9	3	4.5
12	5	5.9
15		7.4
18	7	8.9
20		9.9
22	9	10.9
27		13.4

#### Formats:

Length [cm]	Width [cm]
250	125

#### Format tolerances:

	Tolerance
Length/Width	±3.5 mm
Perpendicularity	±1.0 mm/m
Straightness of sheet edge	±1.0 mm/m

### Number of cycles

Possible frequency of use depends on many factors acting on the formwork sheet. Given optimum conditions of use and correct handling, up to **2 use cycles** (guide value) can be achieved.

## DokaPly cBoard



DokaPly cBoard is a chipboard sheet with film coating on both sides for smooth concrete surfaces.

### Sheet structure

Film-coated P5 chipboard sheet.

### Glue-bonding

The glue-bonding meets the requirements of EN 312 Type P5.

### Surfaces

- Both sides melamine-resin film coating with 160 g per m<sup>2</sup> and side.
- Edge sealing: Acrylic-resin varnish.

## Technical data

### Note:

All values in the tables are based on a sheet moisture content of  $9 \pm 3\%$  on delivery.

Changes in the wood's moisture content can have effects on the weight, dimensions and mechanical properties of the sheet.

### Thickness and weight:

Nominal thickness [mm]	Weight [kg/m <sup>2</sup> ]
20.5	13.5

### Formats:

Length [cm]	Width [cm]
250	62.5
250	125

### Format tolerances:

	Tolerance
Length/Width	+ 5.0 mm
Perpendicularity	±2.0 mm/m
Straightness of sheet edge	±1.5 mm/m

### Mechanical properties:

Nominal thickness [mm]	E <sub>m</sub> [N/mm <sup>2</sup> ]		f <sub>m</sub> [N/mm <sup>2</sup> ]		EI [kNm <sup>2</sup> /m]	
		⊥		⊥		⊥
21	2150	2150	-	-	1.54	1.54

E<sub>m</sub> ... mean flexural modulus of elasticity

f<sub>m</sub> ... characteristic flexural stiffness

EI ... Flexural strength

|| ... parallel to the grain

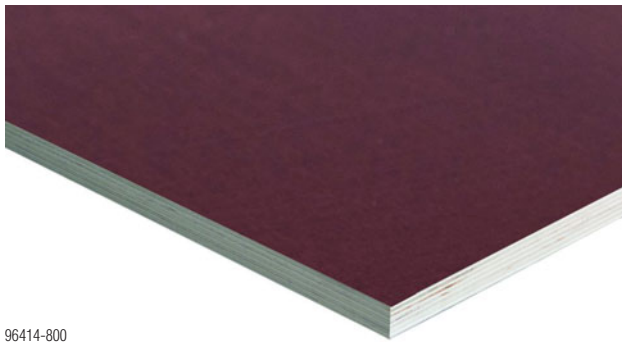
⊥ ... at right angles to the grain

- Fire behaviour:** D - s2, d0
- Formaldehyde class:** E1

## Number of cycles

Possible frequency of use depends on many factors acting on the formwork sheet. Given optimum conditions of use and correct handling, up to **2 use cycles** (guide value) can be achieved.

# UNIPlex



96414-800

**UNIPlex is a plywood sheet made of Chinese poplar with film coating on both sides.**

## Sheet structure

- Film-coated plywood sheet made of Chinese poplar.
- The arrangement of the veneers is crosswise (face veneers butted, longitudinal veneers overlapped).

## Glue-bonding

- Melamine-resin glue-bonding
- The glued bond passes the 24 h boiling test to the Chinese standard.

## Surfaces

- Both sides phenolic-resin film coating with 160 g per m<sup>2</sup> and side.
- Edge sealing: Acrylic-resin varnish.

## Technical data

### Note:

Changes in the wood's moisture content can have effects on the weight, dimensions and mechanical properties of the sheet.

### Thickness and weight:

Nominal thickness [mm]	Layers	Weight [kg/m <sup>2</sup> ]
12	7 - 9	6.0
15	7 - 9	7.5
18	11 - 13	9.0
21	11 - 13	10.5

### Formats:

Length [cm]	Width [cm]
244	122
250	125

### Format tolerances:

	Tolerance
Format	± 1,0 mm/m
Thickness	+ 0.3 / - 1.0 mm

## Number of cycles

Possible frequency of use depends on many factors acting on the formwork sheet. Given optimum conditions of use and correct handling, up to **10 use cycles** (guide value) can be achieved.

## UNiplex plus

UNiplex plus is a plywood sheet made of high-grade Chinese poplar with film coating on both sides.

### Sheet structure

- Film-coated plywood sheet made of Chinese poplar.
- The veneers are full-size or scarf-jointed and arranged crosswise.

### Glue-bonding

- Phenolic-resin glue-bonding.
- The glued bond passes the 72 h boiling test to the Chinese standard.

### Surfaces

- Both sides phenolic-resin film coating with 160 g per m<sup>2</sup> and side.
- Edge sealing: Acrylic-resin varnish.

## Technical data

### Note:

Changes in the wood's moisture content can have effects on the weight, dimensions and mechanical properties of the sheet.

### Thickness and weight:

Nominal thickness [mm]	Layers	Weight [kg/m <sup>2</sup> ]
12	7 - 9	6.0
15	7 - 9	7.5
18	11 - 13	9.0
21	11 - 13	10.5

### Formats:

Length [cm]	Width [cm]
244	122
250	125

### Format tolerances:

	Tolerance
Format	± 1,0 mm/m
Thickness	+ 0.3 / - 1.0 mm

## Number of cycles

Possible frequency of use depends on many factors acting on the formwork sheet. Given optimum conditions of use and correct handling, up to **15 use cycles** (guide value) can be achieved.

# CUTplex

CUTplex is a plywood sheet made of Chinese poplar with film coating on both sides, for box-outs and cuttings.

## Sheet structure

- Film-coated plywood sheet made of Chinese poplar.
- The arrangement of the veneers is crosswise.

## Glue-bonding

- Melamine-resin glue-bonding
- The glued bond passes the 24 h boiling test to the Chinese standard.

## Surfaces

- Both sides phenolic-resin film coating with 160 g per m<sup>2</sup> and side.
- Edge sealing: Acrylic-resin varnish.

## Technical data

### Note:

Changes in the wood's moisture content can have effects on the weight, dimensions and mechanical properties of the sheet.

### Thickness and weight:

Nominal thickness [mm]	Layers	Weight [kg/m <sup>2</sup> ]
12	7 - 9	6.0
15	7 - 9	7.5
18	11 - 13	9.0
21	11 - 13	10.5

### Formats:

Length [cm]	Width [cm]
244	122
250	125

### Format tolerances:

	Tolerance
Format	± 2,0 mm/m
Thickness	± 1.2 mm

## Number of cycles

Possible frequency of use depends on many factors acting on the formwork sheet. Given optimum conditions of use and correct handling, up to **7 use cycles** (guide value) can be achieved.

## CUTplex basic

CUTplex basic is a plywood sheet made of Chinese poplar with film coating on both sides, for subordinate purposes and for cuttings.

### Sheet structure

- Film-coated plywood sheet made of Chinese poplar.
- The arrangement of the veneers is crosswise.

### Glue-bonding

- Melamine-resin glue-bonding
- The glued bond passes the 24 h boiling test to the Chinese standard.

### Surfaces

- Both sides phenolic-resin film coating with 160 g per m<sup>2</sup> and side.
- Edge sealing: Acrylic-resin varnish.

## Technical data

### Note:

Changes in the wood's moisture content can have effects on the weight, dimensions and mechanical properties of the sheet.

### Thickness and weight:

Nominal thickness [mm]	Layers	Weight [kg/m <sup>2</sup> ]
12	7 - 9	6.0
15	7 - 9	7.5
18	11 - 13	9.0
20	11 - 13	10.0

### Formats:

Length [cm]	Width [cm]
244	122
250	125

### Format tolerances:

	Tolerance
Format	± 2,0 mm/m
Thickness	± 1,5 mm

## Number of cycles

Possible frequency of use depends on many factors acting on the formwork sheet. Given optimum conditions of use and correct handling, up to **4 use cycles** (guide value) can be achieved.



# FILLplex

FILLplex is a sheet with recycled core and film coating on both sides, manufactured in China, for low requirements in the cuttings sector.

## Sheet structure

Film-coated sheet with recycled core.

## Surfaces

- Both sides phenolic-resin film coating with 160 g per m<sup>2</sup> and side.
- Edge sealing: Acrylic-resin varnish.

## Technical data

### Note:

Changes in the wood's moisture content can have effects on the weight, dimensions and mechanical properties of the sheet.

### Thickness and weight:

Nominal thickness [mm]	Weight [kg/m <sup>2</sup> ]
12	6.0
15	7.5
18	9.0
21	10.5

### Formats:

Length [cm]	Width [cm]
244	122
250	125

### Format tolerances:

	Tolerance
Format	± 2,0 mm/m
Thickness	± 1.2 mm

## Number of cycles

Possible frequency of use depends on many factors acting on the formwork sheet. Given optimum conditions of use and correct handling, up to **3 use cycles** (guide value) can be achieved.

## FILLplex budget

FILLplex budget is a sheet with recycled core and film coating on both sides, manufactured in China for one-time use with minimal requirements in the cuttings sector.

### Sheet structure

Film-coated sheet with recycled core.

### Surfaces

- Both sides phenolic-resin film coating with 160 g per m<sup>2</sup> and side.
- Edge sealing: Acrylic-resin varnish.

## Technical data

### Note:

Changes in the wood's moisture content can have effects on the weight, dimensions and mechanical properties of the sheet.

### Thickness and weight:

Nominal thickness [mm]	Weight [kg/m <sup>2</sup> ]
12	6.0
15	7.5
18	9.0
21	10.5

### Formats:

Length [cm]	Width [cm]
244	122
250	125

### Format tolerances:

	Tolerance
Format	± 2,0 mm/m
Thickness	± 2.0 mm

## Number of cycles

The formwork sheet is intended for **one-time use**.

# EUCaplex

Eucaplex is a Chinese eucalyptus-veneer plywood sheet with film coating on both sides, for simple horizontal and vertical formwork applications.

## Sheet structure

- Film-coated plywood sheet made of Chinese eucalyptus.
- The veneers are scarf-jointed and arranged cross-wise.

## Glue-bonding

- Melamine-resin glue-bonding
- The glued bond passes the 24 h boiling test to the Chinese standard.

## Surfaces

- Both sides phenolic-resin film coating with 130 g per m<sup>2</sup> and side.
- Edge sealing: Acrylic-resin varnish.

## Technical data

### Note:

All values in the tables are based on a sheet moisture content of  $10 \pm 2\%$  on delivery.

Changes in the wood's moisture content can have effects on the weight, dimensions and mechanical properties of the sheet.

The grain of the outside layers of this formwork sheet runs transverse to the longitudinal direction of the sheet.

### Thickness and weight:

Nominal thickness [mm]	Layers	Weight [kg/m <sup>2</sup> ]
18	11	10.5
21	13	12.3

### Formats:

Length [cm]	Width [cm]
122	244
125	250

### Format tolerances:

	Tolerance
Length/Width	$\pm 1.0$ mm/m
Thickness	$\pm 0.5$ mm

### Mechanical properties:

Nominal thickness [mm]	E <sub>m</sub> [N/mm <sup>2</sup> ]		f <sub>m</sub> [N/mm <sup>2</sup> ]		EI [kNm <sup>2</sup> /m]	
		⊥		⊥		⊥
18	8038	5962	34.2	29.0	3.91	2.90
21	7668	6114	33.5	29.2	5.92	4.72

E<sub>m</sub> ... mean flexural modulus of elasticity

f<sub>m</sub> ... characteristic flexural stiffness

EI ... Flexural strength

|| ... parallel to the grain

⊥ ... at right angles to the grain

**Formaldehyde class: E1**

## Number of cycles

Possible frequency of use depends on many factors acting on the formwork sheet. Given optimum conditions of use and correct handling, up to **10 use cycles** (guide value) can be achieved.

# EUCApex plus

Eucaplex plus is a Chinese eucalyptus-veneer plywood sheet with film coating on both sides, for horizontal and vertical formwork applications.

## Sheet structure

- Film-coated plywood sheet made of Chinese eucalyptus.
- The veneers are full-size or scarf-jointed and arranged crosswise.

## Glue-bonding

- Phenolic-resin glue-bonding.
- The glued bond passes the 72 h boiling test to the Chinese standard.

## Surfaces

- Both sides phenolic-resin film coating with 240 g per m<sup>2</sup> and side.
- Edge sealing: Acrylic-resin varnish.

## Technical data

### Note:

All values in the tables are based on a sheet moisture content of  $10 \pm 2\%$  on delivery.

Changes in the wood's moisture content can have effects on the weight, dimensions and mechanical properties of the sheet.

The grain of the outside layers of this formwork sheet runs transverse to the longitudinal direction of the sheet.

### Thickness and weight:

Nominal thickness [mm]	Layers	Weight [kg/m <sup>2</sup> ]
18	11	10.5
21	13	12.3

### Formats:

Length [cm]	Width [cm]
122	244
125	250

### Format tolerances:

	Tolerance
Length/Width	$\pm 1.0$ mm/m
Thickness	$\pm 0.5$ mm

### Mechanical properties:

Nominal thickness [mm]	E <sub>m</sub> [N/mm <sup>2</sup> ]		f <sub>m</sub> [N/mm <sup>2</sup> ]		EI [kNm <sup>2</sup> /m]	
		⊥		⊥		⊥
18	8038	5962	34.2	29.0	3.91	2.90
21	7668	6114	33.5	29.2	5.92	4.72

E<sub>m</sub> ... mean flexural modulus of elasticity

f<sub>m</sub> ... characteristic flexural stiffness

EI ... Flexural strength

|| ... parallel to the grain

⊥ ... at right angles to the grain

**Formaldehyde class: E1**

## Number of cycles

Possible frequency of use depends on many factors acting on the formwork sheet. Given optimum conditions of use and correct handling, up to **20 use cycles** (guide value) can be achieved.

# General

## Basic instructions

Ensure that the formwork sheets are treated correctly whenever they are used.

Formwork sheets are subject to the natural swelling and shrinkage of wood associated with moisture absorption and loss in the corresponding climatic conditions.

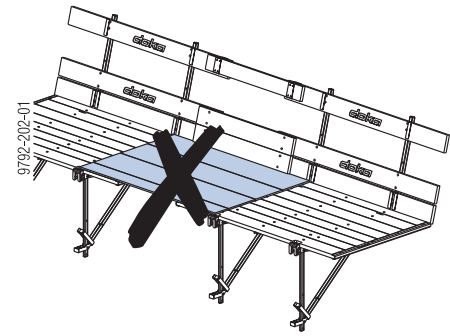
- ▶ Prior to use, always make sure that the wood moisture content of the formwork sheets is matched to that of the surroundings.
- ▶ Cover sheets to protect them from extreme climatic influences such as exposure to sunlight or moisture. This reduces cracking.
- ▶ Seal cut edges, and around holes, with edge varnish.
- ▶ Use a high-quality release agent (e.g. Doka-Trenn or Doka-OptiX).
- ▶ Immediately after stripping the formwork, remove concrete residues from the surfaces that were in contact with the concrete.



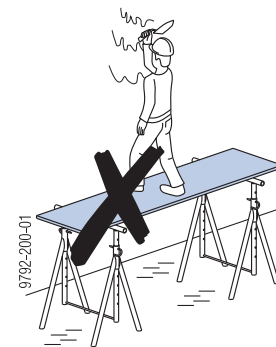
### NOTICE

Do not use pointed or sharp objects, wire brushes, abrasive disks or cup brushes.  
Do not use high-pressure spray cleaners.

Do not use to bridge closures at platforms.



Do not use as scaffold planking.



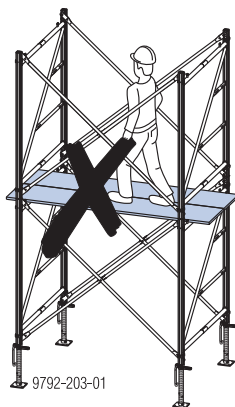
## Possible incorrect usages



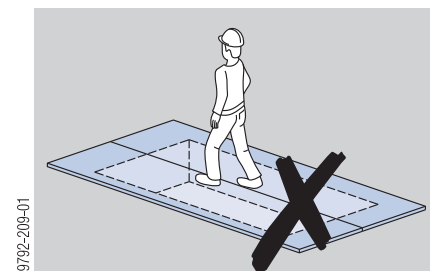
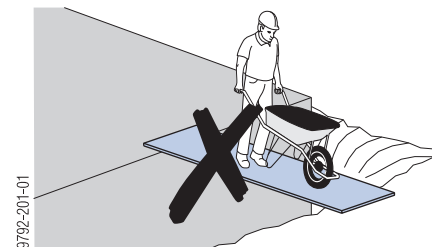
### WARNING

- ▶ The uses illustrated below are prohibited, as are other, similar uses!

Do not use as assembly planking for erecting load-bearing towers.



Do not use in the construction of traffic routes or to cover break-throughs, etc.



## Reprocessing scrap material

The Doka formwork sheets contain no wood preservatives, so they can be recycled.

Incineration in suitable incineration plants is recommended, in accordance with national regulations. Do not burn in open fires or in household solid-fuel stoves or furnaces.

## Deflection diagrams

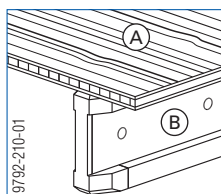
All values in the diagrams are based on a wood moisture content of 20%. If the moisture levels are higher than this, two effects will occur: The modulus of elasticity will greatly decrease (i.e. deformation will increase), and the strength values will be lower. This leads to a reduction in the load-bearing capacity.

### Doka formwork sheets 3-SO, 3S basic, 3S top, FF20

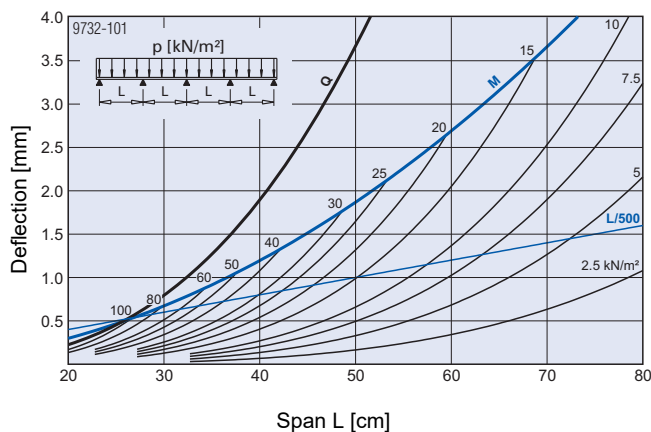


#### NOTICE

The grain of the face layer (A) must run at right angles to the supports (B).

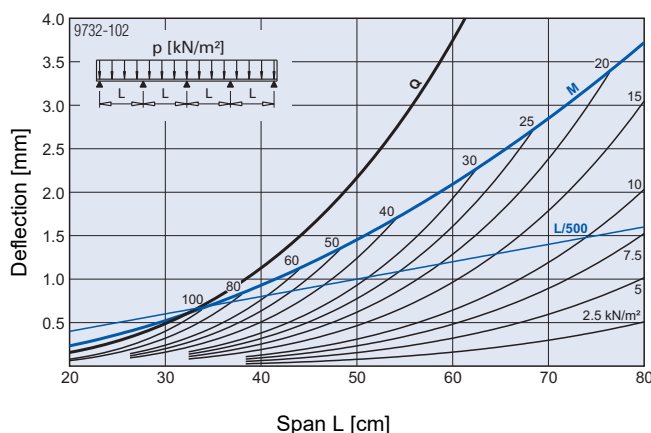


#### 21 mm



M ... permitted bending moment  
Q ... permitted shear force

#### 27 mm



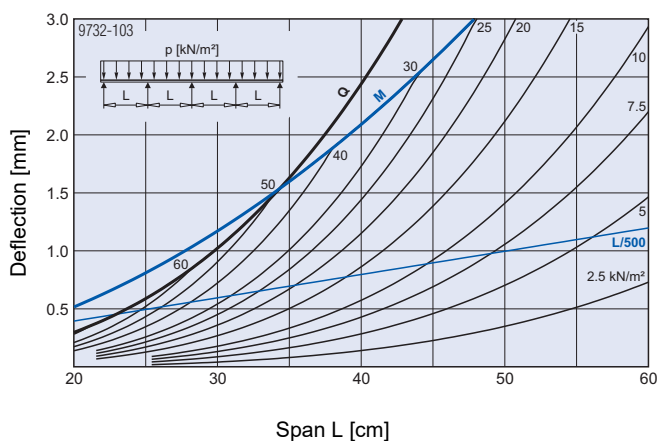
M ... permitted bending moment  
Q ... permitted shear force

## Dokaplex formwork sheets

#### Note:

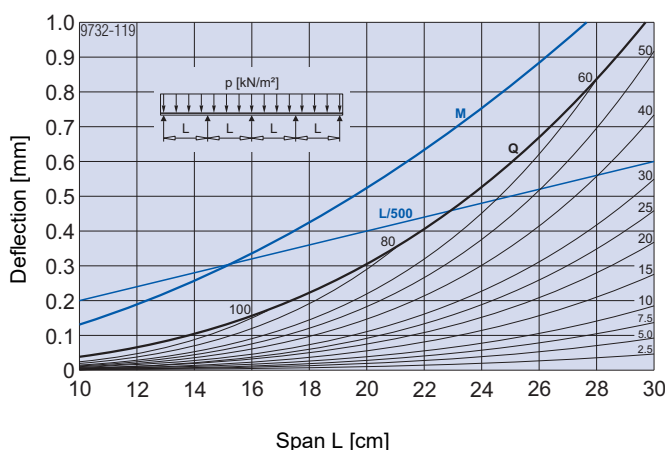
The grain of the face layer can be arranged in any direction relative to the supports.

#### 18 mm



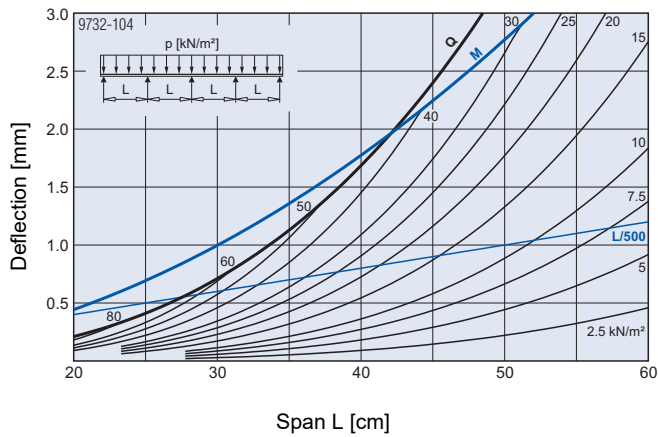
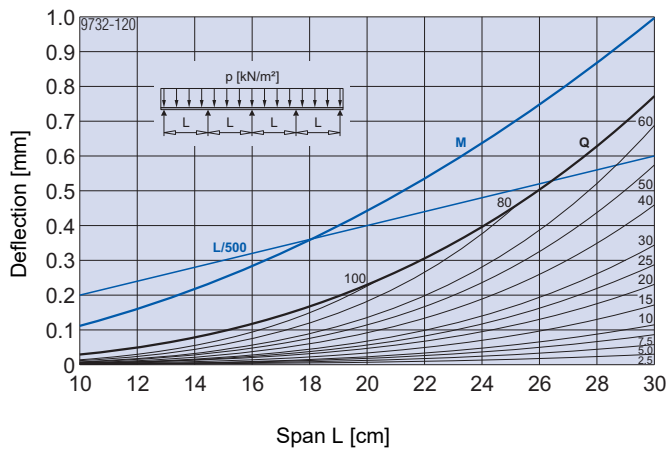
M ... permitted bending moment  
Q ... permitted shear force

#### 18 mm - detailed view



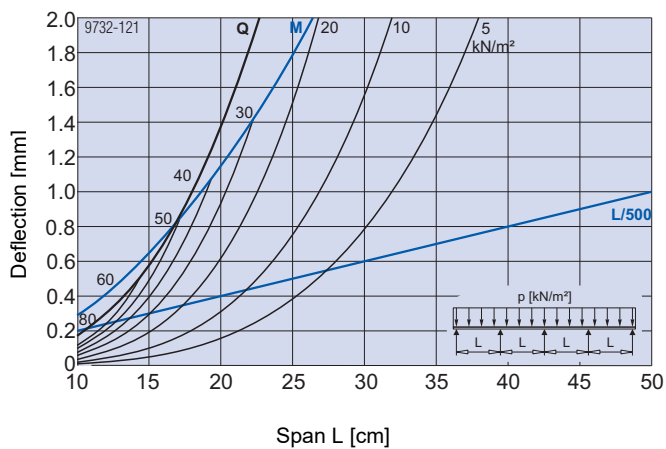
M ... permitted bending moment  
Q ... permitted shear force



**21 mm****21 mm - detailed view****9 mm**

The Dokaplex formwork sheet 9mm is mainly used for forming curved surfaces, as inliners on profiled timber formers or on solid-timber formwork.

In cases where only low loading occurs, the form-facing can be dimensioned with reference to the diagram below.

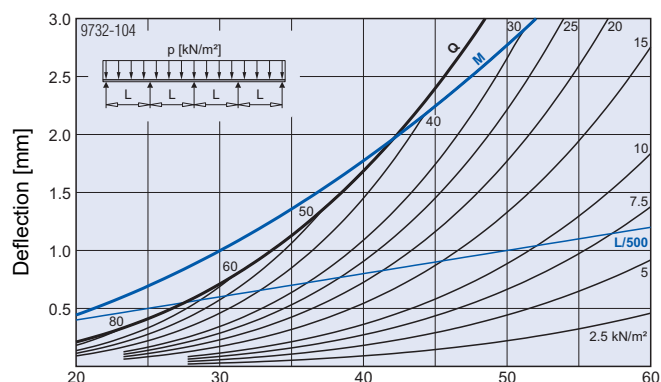


# DokaPly Birch, DokaPly Birch plus

## Note:

The grain of the face layer can be arranged in any direction relative to the supports.

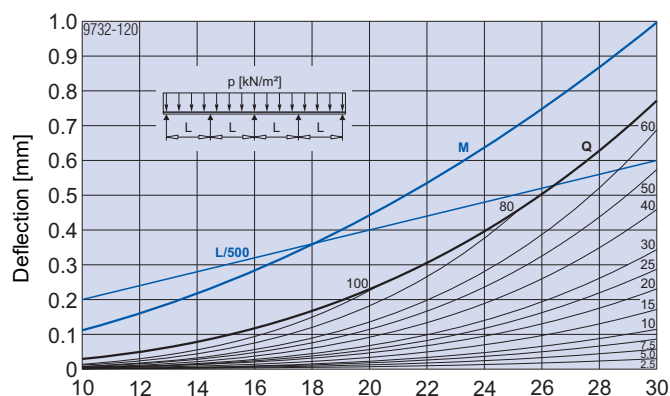
## 21 mm



Span L [cm]

M ... permitted bending moment  
Q ... permitted shear force

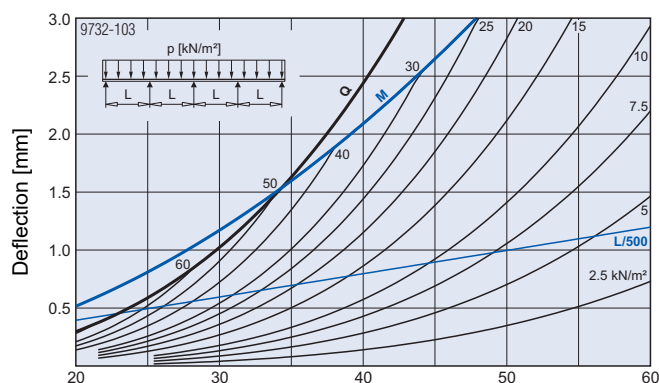
## 21 mm - detailed view



Span L [cm]

M ... permitted bending moment  
Q ... permitted shear force

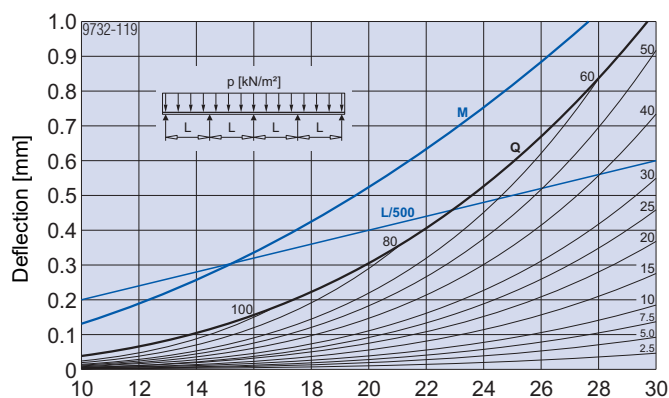
## 18 mm



Span L [cm]

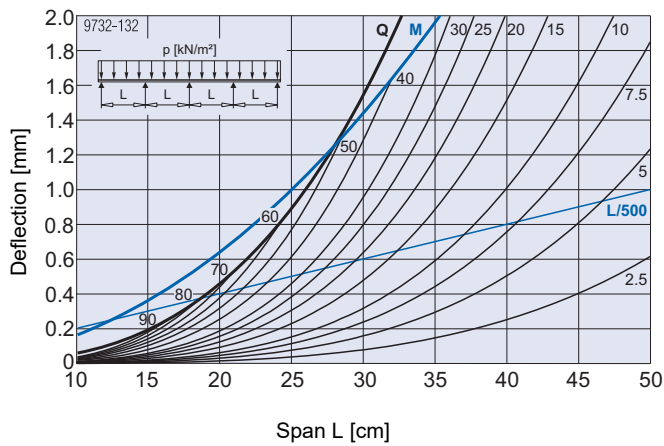
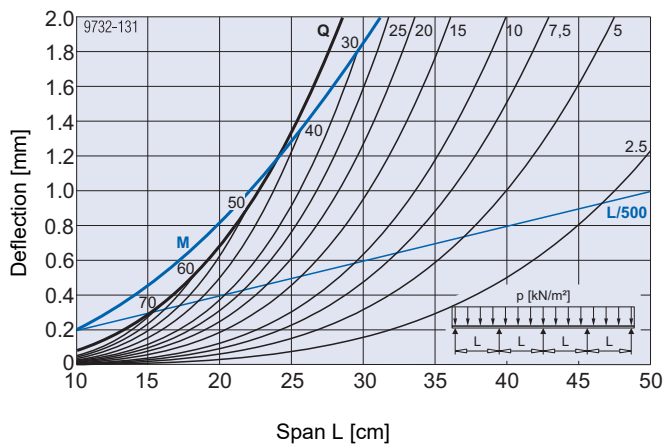
M ... permitted bending moment  
Q ... permitted shear force

## 18 mm - detailed view



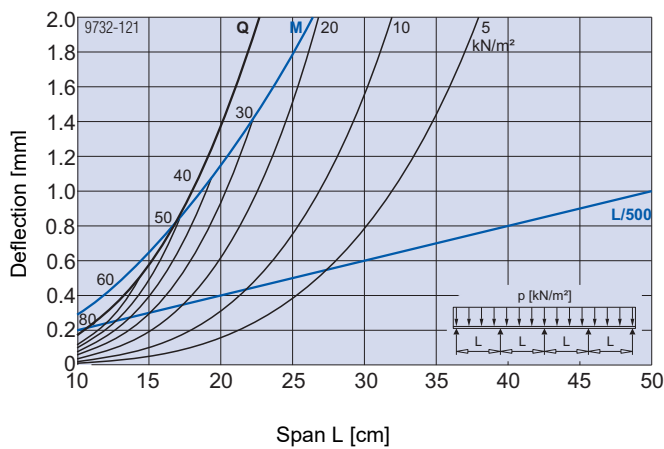
Span L [cm]

M ... permitted bending moment  
Q ... permitted shear force

**15 mm****12 mm****9 mm**

The DokaPly Birch formwork sheet 9mm is mainly used for forming curved surfaces, as inliners on profiled timber formers or on solid-timber formwork.

In cases where only low loading occurs, the form-facing can be dimensioned with reference to the graph below.

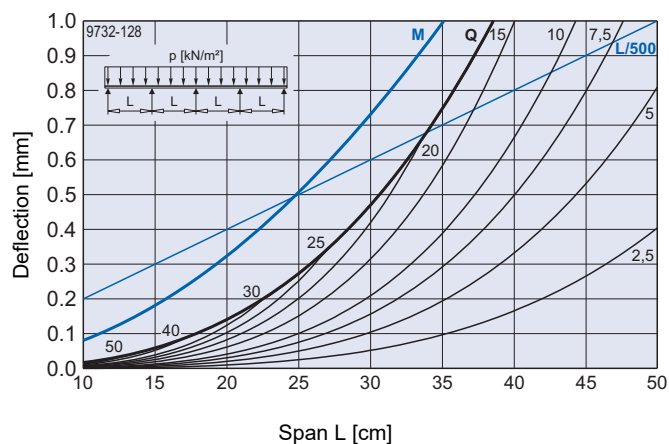


## DokaPly Spruce

### Note:

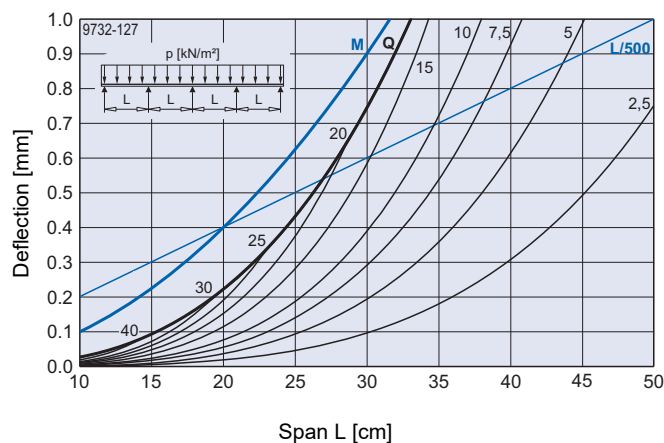
The grain of the face layer can be arranged in any direction relative to the supports.

### 21 mm



M ... permitted bending moment  
Q ... permitted shear force

### 18 mm



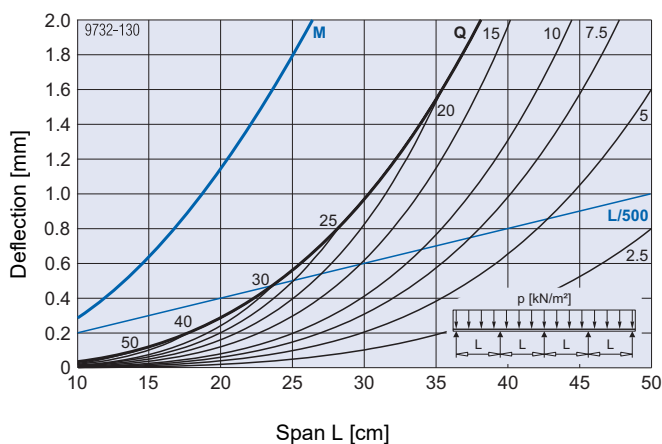
M ... permitted bending moment  
Q ... permitted shear force

## DokaPly eco

### Note:

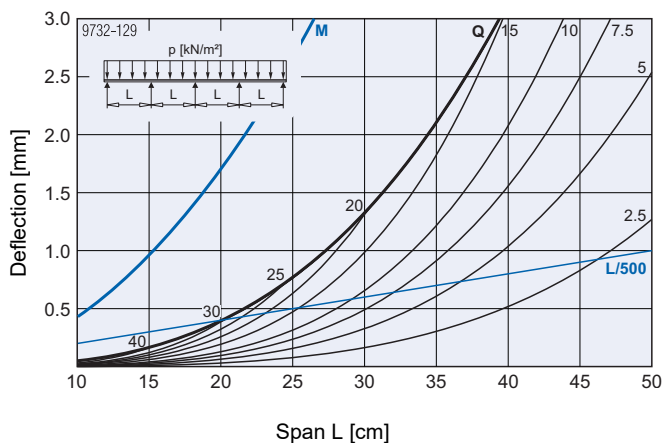
The grain of the face layer can be arranged in any direction relative to the supports.

### 21 mm



M ... permitted bending moment  
Q ... permitted shear force

### 18 mm



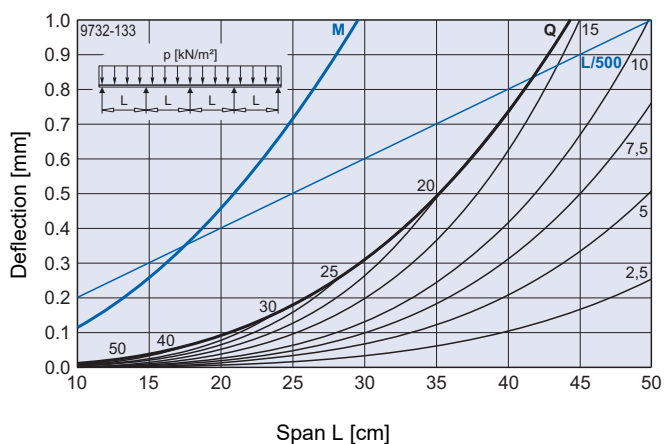
M ... permitted bending moment  
Q ... permitted shear force

## EUCApex, EUCApex plus

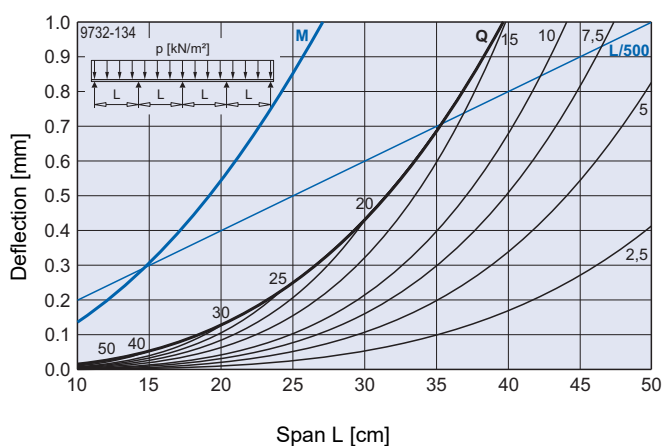
### Note:

The grain of the face layer can be arranged in any direction relative to the supports.

### 21 mm



### 18 mm



# Xlife sheets 21mm

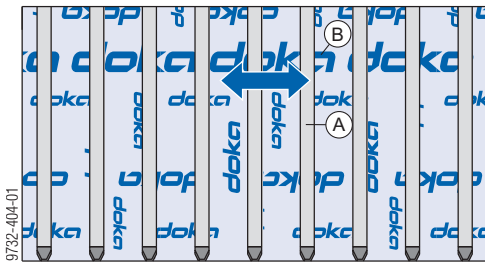


## NOTICE

The deflection characteristics of the Xlife sheet in the longitudinal are different from those in the transverse direction. The only way to tell which is the longitudinal and which is the transverse direction is by the direction of the lettering on the formwork sheets.

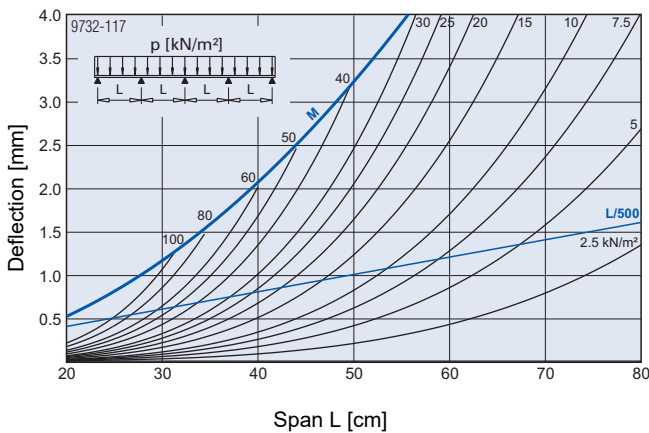
For the purpose of the following diagrams, then, be sure to know which way round the Xlife sheets are placed in relation to the supports (e.g. Doka beams).

**Large Doka logos of the sheet lettering at right angles to the beam axis (Xlife sheet longside horizontal)**



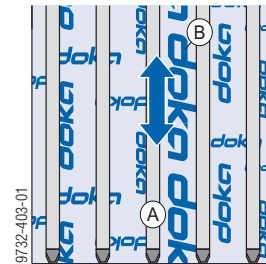
**A** Support

**B** Sheet lettering (large Doka logos)



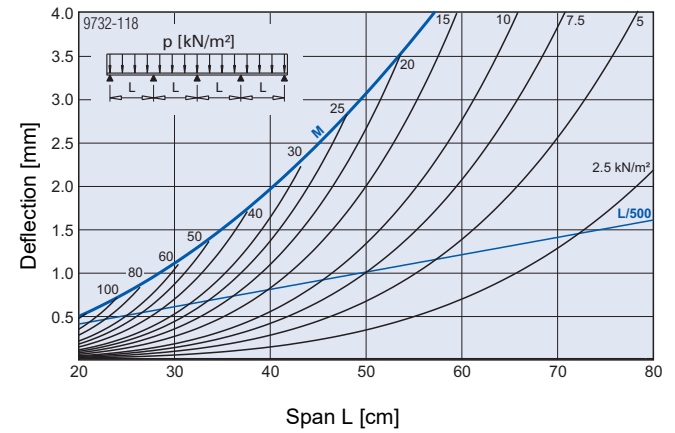
M ... permitted bending moment

**Large Doka logos of the sheet lettering parallel to the beam axis (Xlife sheet longside vertical)**



**A** Support

**B** Sheet lettering (large Doka logos)



M ... permitted bending moment

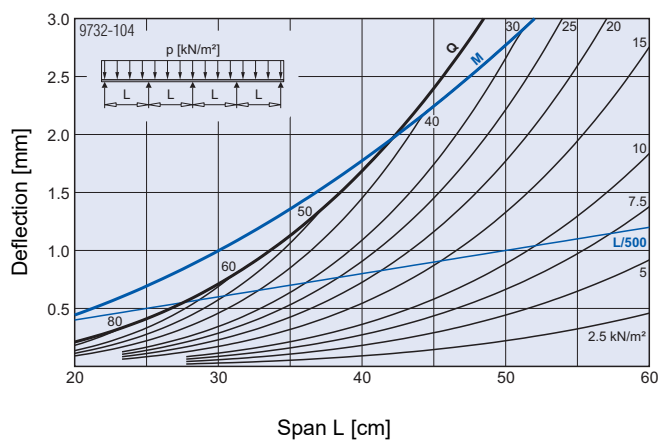


## Xface sheets 21mm

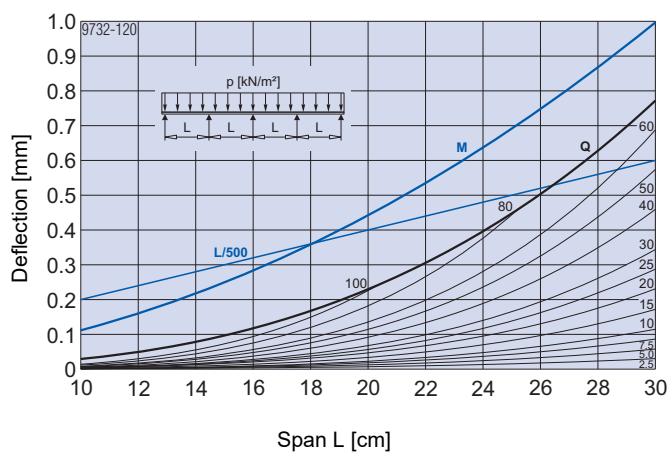
### Note:

The grain of the face layer can be arranged in any direction relative to the supports.

### 21 mm



### 21 mm - detailed view



## Influences on the formwork sheets and concrete surfaces

Concrete surfaces are the mirror-image of the form-facing. The overall appearance of the formwork sheeting used is a critical factor when it comes to achieving visually attractive concrete surfaces.

Depending on the desired appearance of the finished concrete, therefore, the condition of the formwork sheeting has to be taken into consideration, particularly when the number of re-use cycles is high.

### Note:

For information on producing fair-faced concrete surfaces see the Doka brochure entitled 'Fair-faced concrete' or go to [www.doka.com/sichtbeton](http://www.doka.com/sichtbeton).



### NOTICE

The load-bearing strength of the formwork sheet must not be impaired. Damage, cracks, and cuts running at right-angles to the load-bearing direction may greatly reduce a sheet's load-bearing strength, and so need to be examined very carefully. Any suspect sheets must be withdrawn from use.

## Dimensional changes in formwork sheets

### Appearance

Differences in thickness between formwork sheets, height mismatches at joints between sheets, indentations near nails and screws.

### Cause

- Wood is hygroscopic, meaning that it either absorbs moisture from its surroundings (air, soil, precipitation), or releases it back again.
- The increase/decrease in timber moisture content leads to an increase/decrease in the length, width and thickness (with different swelling and shrinkage in each of the three main wood-anatomical directions).
- Immediately after production, the formwork sheets have a timber moisture content of approx. 9 - 12 %; once in service on the site, their timber moisture content usually rises to approx. 18 - 25 %. The table contains guideline values for the dimensional changes:

	Thickness*	Width/length*
3-ply formwork sheets, 3-S	approx. 6 %	approx. 0.1 %
Plywood sheets	approx. 9 %	approx. 0.2 %

\*) swelling stated as percentage

### Remedies

- Do not mix new and used formwork sheets.
- Use formwork sheets that have all been used approximately the same number of times.
- When assembling formwork, leave nails or screws sticking out slightly – never recess them into the sheet.
- To meet stringent specifications regarding the concrete finish, screw on the formwork sheets from the rear.
- Seal all cut edges with edge-protection varnish

## Damage to the formwork sheets from vibrators

### Appearance

Curved or oblong roughened depressions on the surface of the formwork sheet. In the damaged places, the surface coating may have been partly or even completely worn away. The wood has been roughened down to a depth of several millimetres.

### Cause

- Direct and prolonged contact between the vibrator spud and the formwork sheet.

### Remedies

- Avoid any contact between the vibrator and the sheet.
- Rubber-capped vibrator spuds can lessen or prevent damage.

## Surface sanding on the concrete

### Appearance

Extensive or localised sanding on or near the surface of the concrete. Unlike on dusty concrete surfaces, what may happen here is that fine fractions of the aggregates are 'abraded'.

### Cause

- Impaired hydration.
- The formwork sheets used were very dry, causing moisture removal during hydration.
- The concrete surface dried out too strongly/rapidly.
- Insufficient curing.

### Remedies

- Pre-treat the formwork sheets with cement slurry, and pre-wet them. Pre-treating with cement slurry neutralises any wood sugar that may be present, and pre-wetting prevents the formwork from absorbing too strongly.
- Use a suitable release-agent.
- Use suitable curing methods. Protect the concrete from extreme temperatures and from being dried out by the wind.

## Different gradations of grey in the concrete

### Appearance

The concrete exhibits various different shades of grey. This may occur within individual formwork sheets and/or between adjacent formwork sheets.

As a basic rule:

Non-absorbent or low-absorbency sheets tend to produce light-coloured concrete surfaces, while more absorbent formwork sheets tend to cause a darker concrete surface. This is why e.g. a light grey concrete surface is the result of using low-absorbency sheet surfaces such as 3-S plus, Dokaplex, etc.

Factors such as release-agents, forming-waxes, changes in the absorption behaviour of the sheet caused by the degree of saturation etc., can all affect these results.

### Causes

- The absorbency of formwork sheets is influenced by the following factors:
  - the type of formwork sheet and the quality of its coating
  - the age of the formwork sheets (how often used, wear-and-tear during use, etc.)
  - the weather
- Heavily weathered formwork sheets (e.g. with very dried-out, cracked surfaces) often have very different absorbencies. This can lead to speckled concrete and in extreme cases to surface sanding on the concrete.
- When formwork sheets are stored in stacks, the top sheet may have been so dried out by the sun that it has a different absorbency from all the other sheets further down the stack.

### Remedies

- To meet fair-faced concrete specifications, use only formwork sheets of the same type and the same level of wear-and-tear (storage history, how used, and for how long).
- Before sheets are used for the first time, avoid storing them for a long time under adverse climatic conditions.
- To meet tougher specifications regarding the concrete finish, protect the formwork sheets from climatic influences between the pouring cycles as well, as far as possible.
- Covering the stacked sheets prevents exposed sheets from drying-out.
- Spray the formwork sheets with the release-agent recommended by the manufacturers.

**NOTICE**

Especially on cool or cold days and when relative atmospheric humidity is high, pronounced light/dark colouration of the concrete surface may occur. The formwork sheets have only a limited effect on these light/dark differences, which also result from the slower hydration of the concrete at low temperatures.

## Lime efflorescence on slabs

---

### Appearance

---

Concentrated or extensive speckled white discolouration, or white deposits, on the surface of the concrete.

### Causes

---

- Excess water increasingly causes calcium hydroxide to migrate from inside the concrete to the surface. The calcium hydroxide reacts with the CO<sub>2</sub> in the atmosphere to form calcium carbonate (lime).
- Efflorescence may be caused by e.g. the freshly poured slab being sprayed with water in hot weather.
- Seepage of water through the concrete, especially in slabs and in box-outs and apertures in the slab, may lead to lime efflorescence on the soffit
- The w/b (water-binder) ratio varies depending on the absorbency of the formwork sheet, causing the efflorescence to take various different forms.
- On young concrete, climatic influences (e.g. mist or rain) can lead to localised or extensive lightening, caused by a chalky haze which in some cases is barely soluble.

### Remedies

---

- Where fair-faced concrete specifications have to be met, choose suitable curing methods. We strongly advise against moistening the concrete surface!
- Commercially available countermeasures such as plastic sheets and covering tarpaulins will keep the concrete from drying too quickly. Where tough specifications have been made regarding the concrete finish, make sure that the plastic sheet does not touch the surface of the concrete.
- Hydrophobising the concrete surface can prevent lime efflorescence caused by e.g. rain.
- Absorbent formwork sheets reduce the w/b ratio in the edge zone, meaning that the edge zone contains fewer capillary pores. This can have a positive effect in terms of reducing lime efflorescence.

## Inhomogeneities in the concrete surface

---

### Appearance

---

Excess application of concrete release agent onto non-absorbent formwork sheets may lead to increased inclusion of dirt and dust particles. These may leave an imprint on the concrete surface after the formwork has been struck. Also, excess application of concrete release agent, and climatic influences such as rainfall etc., may cause the following inhomogeneities:

- Staining, cloudiness, lack of homogeneity
- Increased dust formation
- Seepage marks

### Causes

---

- Wet sheet surfaces.
- Dirty formwork sheets.
- The sheets have different absorbencies.
- The ventilation time specified for the concrete release agent has not been observed.
- Excess application of concrete release agent.
- Wrong sprayer or nozzle for the concrete release agent.

### Remedies

---

- Use the correct concrete release agent.
- Observe the information and recommendations given by the manufacturer.
- Comply with / check the application dosage specified for the concrete release agent. A thin application of release-agent generally results in a better concrete surface. Avoid excess application of release-agent. Wipe off any excess release-agent carefully and evenly, with e.g. a clean cloth. If you use a rubber squeegee, make sure that you do not remove all of the release-agent from the formwork sheet.
- To meet high and extra-high specifications regarding the quality of the concrete finish, do some trial pours first.

## Formation of pores and voids at the surface

### Appearance

Increased number of pores at the concrete surface.

### Causes

This section only deals with causes of porosity that have to do with formwork sheets and concrete release agent. Remember that there are many other factors which may also lead to an increased number of pores on concrete surfaces.

- Excess application of concrete release agent.
- Low temperatures and the increased viscosity of the release-agent that these cause (esp. petroleum-based release-agents with or without additives).
- Non-absorbent formwork sheets.
- Composition of the concrete.

### Remedies

- Use suitable concrete release agents. On non-absorbent formwork sheets, concrete release agents that have a hydrophilic effect (such as aqueous release-agent emulsions) can help to decrease the number of pores at the concrete surface or even to prevent porosity altogether. These concrete release agents also have a positive effect on concrete surface porosity at low temperatures.
- Use absorbent formwork sheets.
- Avoid excess application of concrete release agent.
- Apply the concrete release agent thinly and evenly.
- Observe the specified ventilation times for emulsions.

## Texturing or cracking on the three-ply sheet

### Appearance

With softwood 3-ply sheets, the pattern of the timber is immediately apparent on the concrete surface.

### Causes

- When formwork sheets are stored outdoors in unfavourable conditions, or while they are being used, climatic influences and concrete-water may cause the timber to swell or shrink.
- This leads firstly to an intensification of the annual-ring structure, and secondly to a certain amount of cracking and grooving in the face layer.
- Although the changes occurring in the surface are quite pronounced at the beginning, they then only continue in a much reduced form.

## Remedies

- On extremely hot days, keep the formwork sheets moist by e.g. spraying them with water – this guards against cracking and grooving.
- Store formwork elements and panels in such a way that they will not be exposed to prolonged sunshine. e.g.: store pre-assembled elements form-face to form-face; use covers etc.
- In extreme climatic conditions, e.g. desert climates (meaning climates where the relative atmospheric humidity has a monthly average of less than 45 %), plywood formwork sheets should be used instead of 3-S formwork sheets.

## Brown discolouration of the three-ply sheet

### Appearance

Right from the first times of use, a brown discoloration starts to take place in the surface of the formwork sheet. The more severe the conditions to which the sheet is exposed, the more pronounced this discoloration will be.

### Causes

- This is primarily a reaction of the timber to the concrete-water.
- UV radiation also causes discolouration of the timber.

### Remedy

- None. The brown discolouration has no effect on the three-ply sheets or on concrete quality; it is a matter solely of the appearance of the sheets.

## Rippling on plywood sheets

### Appearance

Slight rippling in the surface veneer (max. several tenths of a millimetre high, non-uniformly long).

Either at the edge of the formwork sheet and/or anywhere on the sheet at screw- or nail-points or where there is other damage to the surface.

The undulations are longitudinally aligned in the grain direction of the face veneer.

The undulations only occur for the first few times of use, until the surface veneer has swollen uniformly.

### Causes

- Hairline cracks or minor damage to the phenolic resin-film coating.
- Moisture absorption on unsealed edges of formwork sheets.

This leads to the face veneer absorbing moisture and thus swelling in thickness. However, the adjacent surface of the sheet remains dry. The differing timber moisture contents cause slight rippling.

### Remedies

- Store formwork sheets in a dry place before they are first used.
- Seal all cut edges with edge-protection varnish
- If possible, do not nail the formwork sheets but screw them on from the rear.
- If you do have to screw the sheets on from the front, countersink the screws and grout the screw-holes.
- Avoid damage from e.g. vibrators, hammer-blows etc.
- Pre-treat formwork sheets with cement slurry if necessary.

The rippling will disappear once there is uniform moisture penetration throughout the sheet after its first few times of use.

## Brown discolouration on the surface of the concrete with plywood sheets

### Appearance

Concentrated, intensive brown discoloration on the concrete between the form-tie points and/or on the wall plinth.

Ring- or horseshoe-shaped; often with upsqueezed brown or yellow seepage marks.

### Causes

- Intense exposure to sunshine, i.e. UV stressing, causes precursor damage to the hardened phenolic resin film on phenolic-resin coated plywood sheets. In the summer months, this precursor damage may occur in the space of only a few days.  
Please note: this precursor damage on its own does not lead to any staining on the concrete surface.
- The chain of factors described below leads to concentrated stains on the surface of the concrete:
  - When the formwork is struck, the form-ties are unscrewed. However, the formwork sheets remain in direct contact with the concrete surface for some time.
  - The heat of hydration causes condensation to form between the formwork sheets and the concrete surface.
  - When it comes into contact with the pre-damaged phenolic resin film, this condensation leads to coloured degradation products being washed out.
  - After the condensation has dried, the degradation products are deposited on the surface of the concrete.
- Low-quality release-agents that are less UV-resistant may intensify the brown discoloration on the concrete.

### Remedies

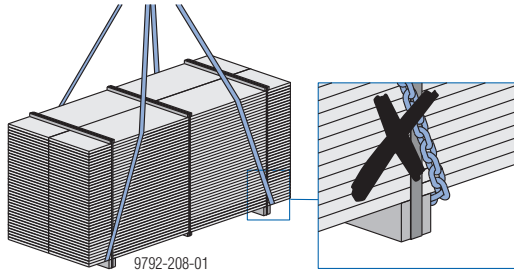
- Protect the surface of the formwork sheets from intense exposure to sunshine.
- Use high-quality release-agents.
- Separate the formwork from the concrete as soon as the form-ties have been unscrewed.



# Transporting, stacking and storing

## Transport

- Always use slings for lifting stacked sheets - do not use chains.
- Always use edge protectors when strapping sheets together. Edge protectors can be padding made of plastic, wood or cardboard.



### NOTICE

When transporting loose sheets without strapping, make sure that the sheets cannot slip!

## Sheet stack



### NOTICE

- Cover the sheet stack to protect the sheets against extremes of weather, for example direct sunlight or moisture. This reduces the tendency of cracks to form in the face ply.
- Do not attempt to place stacks of sheets one on top of another on the construction site.

► Always use edge protectors when strapping sheets together. Edge protectors can be padding made of plastic, cardboard or wood.

### Stack units ex works

Dimensions	Sheets per stack	
	21 mm	27 mm
100/50 cm - 300/50 cm	100	80
350/50 cm - 600/50 cm	60	50
100/100 cm - 300/100 cm	50	40
350/100 cm - 600/100 cm	30	25

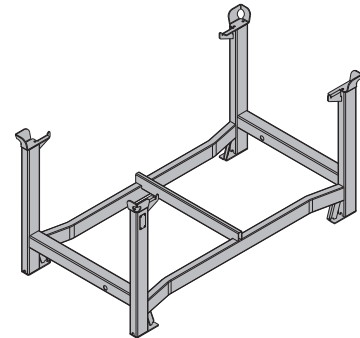
Stack strapped complete with wooden battens 8 x 8 cm

## Ground conditions for stacking

- Maximum angle of inclination of ground 3%.
- The ground on which the stack is to be placed must be adequately firm and level. Best-case conditions are concreted or paved storage areas.
- Storage on asphalt:  
Depending on the parts stored, place wooden battens, strips of formwork sheeting or metal sheet between the parts and the asphalt surface to ensure that the weight is adequately spread.
- Storage on other surfaces (sand, gravel...):  
Adopt suitable measures for storage (e.g. place thick plywood sheets underneath the loads).

## Doka stacking pallet 1.55x0.85m and 1.20x0.80m

Storage and transport devices for long items.



Max. carrying capacity: 1100 kg (2420 lbs)

Permitted imposed load: 5900 kg (12980 lbs)

## Using Doka stacking pallets as storage units

### Max. n° of units on top of one another

Outdoors (on the site) Floor gradients up to 3%	Indoors Floor gradients up to 1%
2	6
It is not allowed to stack empty pallets on top of one another!	



### NOTICE

- Stacked multi-trip boxes or pallets must have the heaviest boxes at the bottom and the lightest at the top.
- **How to use with Bolt-on castor set B:**
  - Always apply the fixing brake when the container is 'parked'.
  - When Doka stacking pallets are stacked, the bottom pallet must NOT be one with a bolt-on castor set mounted to it.

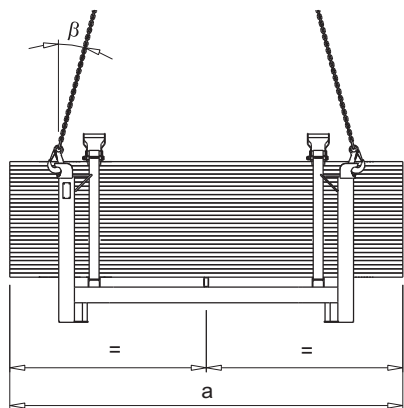
## Using Doka stacking pallets as transport devices

### Lifting by crane



#### NOTICE

- Multi-trip packaging items may only be lifted one at a time.
- Use a suitable lifting chain (e.g. Doka 4-part chain 3.20m). Do not exceed the permitted load-bearing capacity.
- Load the items centrally.
- Fasten the load to the stacking pallet so that it cannot slide or tip out.
- When lifting stacking pallets to which Bolt-on castor sets B have been attached, you must also follow the directions in these Operating Instructions!
- Spread-angle  $\beta$  max. 30°!



9792-211-01

	a
Doka stacking pallet 1.55x0.85m	max. 4.5 m
Doka stacking pallet 1.20x0.80m	max. 3.0 m

### Repositioning by forklift truck or pallet stacking truck



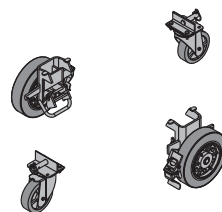
#### NOTICE

- Load the items centrally.
- Fasten the load to the stacking pallet so that it cannot slide or tip out.

## Bolt-on castor set B

The Bolt-on castor set B turns the stacking pallet into a fast and manoeuvrable transport device.

Suitable for drive-through access openings > 90 cm.



The Bolt-on castor set B can be mounted to the following multi-trip packaging items:

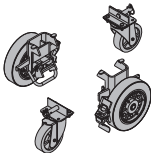
- Doka accessory box
- Doka stacking pallets



Follow the directions in the 'Bolt-on castor set B' Operating Instructions!

**doka** 999792002 - 02/2022 © by Doka GmbH, A-3300 Amstetten 53

	[kg]	Article N°		[kg]	Article N°
DokaPly Birch SC 9mm 125/250cm	19.1	185129000	FILLplex F/F black 160 12mm 125/250cm	18.8	185254000
DokaPly Birch SC 12mm 125/250cm	25.5	185130000	FILLplex F/F black 160 15mm 4'-0"x8'-0"	22.3	185256000
DokaPly Birch SC 15mm 125/250cm	31.9	185099000	FILLplex F/F black 160 15mm 125/250cm	23.4	185255000
DokaPly Birch SC 18mm 122/244cm	36.3	185078000	FILLplex F/F black 160 18mm 4'-0"x8'-0"	26.8	185258000
DokaPly Birch SC 18mm 125/250cm	38.3	185131000	FILLplex F/F black 160 18mm 125/250cm	28.1	185257000
DokaPly Birch SC 18mm 150/300cm	54.9	185079000	FILLplex F/F black 160 21mm 125/250cm	32.8	185259000
DokaPly Birch SC 18mm .....cm	12.2	185080000	FILLplex		
DokaPly Birch SC 21mm 122/244cm	42.6	185081000			
DokaPly Birch SC 21mm 125/250cm	44.7	185082000			
DokaPly Birch SC 21mm 150/300cm	64.4	185083000			
DokaPly Birch SC 21mm .....cm	14.3	185084000			
DokaPly Birch SC					
DokaPly Birch plus F/F120 EXT 18mm 122x244cm	37.0	185268000	FILLplex budget F/F black 160 12mm 125/250cm	18.8	185260000
DokaPly Birch plus F/F120 EXT 21mm 125x250cm	45.3	185266000	FILLplex budget F/F black 160 15mm 4'-0"x8'-0"	22.3	185262000
DokaPly Birch plus F/F120 EXT 21mm 62.5x250cm	22.6	185267000	FILLplex budget F/F black 160 15mm 125/250cm	23.4	185261000
DokaPly Birch plus F/F220 EXT 21mm 150x300cm	65.2	185277000	FILLplex budget F/F black 160 18mm 4'-0"x8'-0"	26.8	185264000
DokaPly Birch plus F/F220 EXT 21mm 125x250cm	45.3	185275000	FILLplex budget F/F black 160 18mm 125/250cm	28.1	185263000
DokaPly Birch plus F/F220 EXT 21mm 62.5x250cm	22.6	185276000	FILLplex budget F/F black 160 21mm 125/250cm	32.8	185265000
DokaPly Birch plus			FILLplex budget		
DokaPly Spruce 18mm 250/125cm	28.1	185057000	EUCAplex F/F d.b. 130 18mm 122/244cm	31.4	185184000
DokaPly Spruce 21mm 250/125cm	31.9	185056000	EUCAplex F/F d.b. 130 18mm 125/250cm	32.9	185185000
DokaPly Spruce			EUCAplex F/F d.b. 130 21mm 122/244cm	36.6	185186000
			EUCAplex F/F d.b. 130 21mm 125/250cm	38.4	185187000
			EUCAplex		
DokaPly eco 18mm 122/244cm	28.4	185132000	EUCAplex plus F/F d.b. 240 EXT 18mm 122/244cm	31.4	185188000
DokaPly eco 18mm 250/125cm	28.1	185059000	EUCAplex plus F/F d.b. 240 EXT 18mm 125/250cm	32.9	185189000
DokaPly eco 21mm 250/62.5cm	16.4	185065000	EUCAplex plus F/F d.b. 240 EXT 21mm 122/244cm	36.6	185190000
DokaPly eco 21mm 250/125cm	32.8	185058000	EUCAplex plus F/F d.b. 240 EXT 21mm 125/250cm	38.4	185191000
DokaPly eco			EUCAplex plus		
DokaPly natural 18mm 250/125cm	28.1	185126000	Doka-Trenn in container of 1000l	899.0	580911000
DokaPly natural 20mm 250/125cm	30.9	185061000	Doka-Trenn in drum of 200l	185.0	580912000
DokaPly natural 22mm 250/125cm	34.4	185127000	Doka-Trenn in canisters of 25l	22.0	580913000
DokaPly natural 25mm 250/125cm	39.1	185159000	Doka-Trenn in canisters of 5l	4.5	580915000
DokaPly natural 27mm 250/125cm	42.2	185128000	Doka-Trenn		
DokaPly natural					
DokaPly cBoard 21mm 250/62,5cm	21.7	185169000	Doka-OptiX 1000l	1011.0	580918000
DokaPly cBoard 21mm 250/125cm	43.3	185168000	Doka-OptiX 210l	215.5	580916000
DokaPly cBoard			Doka-OptiX 20l	20.0	580917000
			Doka-OptiX		
UNiPLEX F/F brown 120 12mm 125/250cm	18.8	185236000	Doka sprayer for release agent	5.3	580914000
UNiPLEX F/F brown 120 15mm 4'-0"x8'-0"	22.3	185238000	Doka-Trennmittel-Spritze		
UNiPLEX F/F brown 120 15mm 125/250cm	23.4	185237000			
UNiPLEX F/F brown 120 18mm 4'-0"x8'-0"	26.8	185240000			
UNiPLEX F/F brown 120 18mm 125/250cm	28.1	185239000			
UNiPLEX F/F brown 120 21mm 125/250cm	32.8	185241000			
UNiPLEX					
UNiPLEX plus F/F brown 120 12mm 125/250cm	18.8	185230000			
UNiPLEX plus F/F brown 120 15mm 4'-0"x8'-0"	22.3	185232000			
UNiPLEX plus F/F brown 120 15mm 125/250cm	23.4	185231000			
UNiPLEX plus F/F brown 120 18mm 4'-0"x8'-0"	26.8	185234000			
UNiPLEX plus F/F brown 120 18mm 125/250cm	28.1	185233000			
UNiPLEX plus F/F brown 120 21mm 125/250cm	32.8	185235000			
UNiPLEX plus					
CUTplex F/F black 160 12mm 125/250cm	18.8	185242000			
CUTplex F/F black 160 15mm 4'-0"x8'-0"	22.3	185244000			
CUTplex F/F black 160 15mm 125/250cm	23.4	185243000			
CUTplex F/F black 160 18mm 4'-0"x8'-0"	26.8	185246000			
CUTplex F/F black 160 18mm 125/250cm	28.1	185245000			
CUTplex F/F black 160 21mm 125/250cm	32.8	185247000			
CUTplex					
CUTplex basic F/F black 160 12mm 125/250cm	18.8	185248000			
CUTplex basic F/F black 160 15mm 4'-0"x8'-0"	22.3	185250000			
CUTplex basic F/F black 160 15mm 125/250cm	23.4	185249000			
CUTplex basic F/F black 160 18mm 4'-0"x8'-0"	26.8	185252000			
CUTplex basic F/F black 160 18mm 125/250cm	28.1	185251000			
CUTplex basic F/F black 160 20mm 125/250cm	31.3	185253000			
CUTplex basic					

	[kg]	Article N°		[kg]	Article N°
<b>Bolt-on castor set B</b> Anklemm-Radsatz B	<b>33.6</b>	<b>586168000</b>			
<div></div> <div>Painted blue</div>					

## Near to you, worldwide

---

Doka is one of the world leaders in developing, manufacturing and distributing formwork technology for use in all fields of the construction sector.

With more than 160 sales and logistics facilities in over 70 countries, the Doka Group has a highly efficient distribution network which ensures that equipment and

technical support are provided swiftly and professionally.

An enterprise forming part of the Umdasch Group, the Doka Group employs a worldwide workforce of more than 6000.

