



## **DELIGNIT® - INDUSTRIAL FLOORS**

ADAPTABLE FOR STAGES, PLATFORMS, SKILLET CONVEYORS AND INDIVIDUAL SOLUTIONS

# BRIEF PORTRAIT OF BLOMBERGER HOLZINDUSTRIE GMBH

**FROM THE OLDEST PLYWOOD MANUFACTURER** in the world to a high-tech material supplier.

Blomberger Holzindustrie GmbH develops, produces and sells ecological materials and system solutions from renewable raw materials under the brand name **Delignit®**. As a recognized development, project and serial supplier of leading automotive groups, Blomberger Holzindustrie GmbH is, among other things, world market leader for supplying the automotive industry with cargo bay protection and cargo securing systems for light commercial vehicles.

With an industry-wide variety of applications and manufacturing range, Blomberger Holzindustrie GmbH serves numerous other technology sectors, for example: as a worldwide system supplier of reputable rail stock manufacturers. **Delignit®** solutions have exceptional technical properties and are further, among other things, used as trunk floors, building equipment and security solutions.



Aerial photograph Blomberger Holzindustrie GmbH

# TRADITION. ECOLOGY. SYSTEM COMPETENCE.



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## DELIGNIT®-INDUSTRIAL FLOOR

**IN BUILDING EQUIPMENT** very particular requirements are set for the floor covering.

**Delignit®-Industrial Floors** made of beech are extremely durable and they win people over with their visual effect and comfort.

This is how the **Delignit®-Industrial Floors** Professional DIF maple meets the highest requirements for industrial floors in the Transparent Factory in Dresden for example. These were classified in line with the highest fire protection class for wood-based materials with B-s1-d0 following DIN EN 13501-1. There is a conductive DIF coating on the surface with a top veneer made of Canadian maple.



Lifting table of a push platform system

### WE HAVE SUITABLE SURFACE COATINGS FOR ALL AREAS OF APPLICATION.

We offer film coatings and high abrasion resistant ESH (electron beam cured) surfaces with a wide range of décors: Veneer, wood décor, paint and more.

Handles, flaps, locks or viewing windows can also be incorporated easily. On request we can manufacture conductive industrial floors which are flame resistant in line with the highest level of European requirements for load bearing materials.

**Delignit®-Industrial Floors** have already been used in **conveyor technology** for **over 20 years**.

### WOODS OFFERS MANY BENEFITS WHEN USED FOR INDUSTRIAL FLOORING:

- ▶ Increased ergonomic benefits due to the shock-absorbing, joint-friendly properties of wood
- ▶ Noise reduction due to the vibration damping properties of wood
- ▶ Living room character helps to provide increased purity
- ▶ A more aesthetically pleasing workplace increases comfort and reduces absences
- ▶ Straightforward disposal



Delignit®-Industrial Floor Professional DIF Maple installed in the Gläserne Manufaktur in Dresden.



Delignit®-Industrial Floor Professional ESH-ESD as a covering for a push platform.

## DELIGNIT®- INDUSTRIAL FLOOR

**INDIVIDUAL USE** for particular challenges.

Whether as a covering for skilnet conveyors, as a sliding table surface below conveyor belts or chain conveyors or as a stage covering. The **Delignit®-Industrial Floors Range** always provides the optimal solution.

High-quality, conductive **Delignit®-Industrial Floor Surfaces** ensure a high degree of protection against possible damage or destruction when installing sensitive electronic components.

**Delignit®-Industrial Floors** are used in many areas of the automotive industry.

The resilient, easy to clean surfaces ensure a high level of value preservation and thus provide considerable investment security through model changes as well.

A high degree of additional security is also provided by the outstanding fire protection properties of

**Delignit®-Industrial Floors.** The Brinell hardness of the beech provides effective surface protection in combination with the highly resilient surface.



Delignit®-Industrial Floor Professional DIF as a covering for a push platform.

## PRODUCT LINES – PERFECT FOR PROFESSIONAL USE

DELIGNIT®-INDUSTRIAL FLOORS ARE AVAILABLE IN FOUR PRODUCT LINES

PROFESSIONAL BEST IN CLASS	PREMIUM	BASIC	CLASSIC
✓ FIRE PROTECTION	✗ FIRE PROTECTION	✓ FIRE PROTECTION	✗ FIRE PROTECTION
✓ CONDUCTIVITY	✓ CONDUCTIVITY	✗ CONDUCTIVITY	✗ CONDUCTIVITY
✓ GENUINE WOOD SURFACE	✓ GENUINE WOOD SURFACE	✗ GENUINE WOOD SURFACE	✗ GENUINE WOOD SURFACE

### THE PROFESSIONAL PACKAGE

The highest level of fire protection plus the best electrostatic conductivity.

### THE PREMIUM PACKAGE

Conductive surface, without fire protection

### THE BASIC PACKAGE

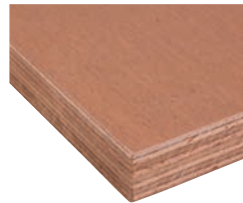
The Basic Package provides you with efficient and flexible solutions for all applications in the flame resistant field.

### THE CLASSIC PACKAGE

Our Classic Package provides an economical solution with various film coatings.



## DELIGNIT®-INDUSTRIAL FLOOR RANGE



light-colored



light-brown

### DELIGNIT®-INDUSTRIAL FLOOR PREMIUM / PROFESSIONAL DIF / DIF 2.0

B-s1-d0 according to EN 13501-1 //

D-s2-d0 according to EN 13501-1

1 x 10<sup>6</sup> to 1 x 10<sup>9</sup> according to DIN EN 61340-4-1

R 9 according to EN 51130

750 Taber according to EN 438 //

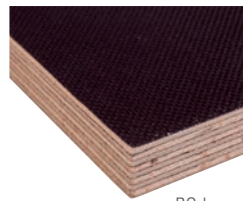
AC 3 according to EN 438



ESH 2.0



CL-FS



RO-brown



GS-anthracite

### DELIGNIT®-INDUSTRIAL FLOOR CLASSIC / BASIC

D-s2-d0 or Bfl-s1 according to EN 13501-1 /

B-s1-d0 according to EN 13501-1

Body voltage < 2KV acc. DIN IEC 61340-4-1

750 Taber according to EN 438 //

AC 4 according to DIN EN 13329

Slip resistance R 9 to R 12 according to DIN EN 51130

## SPECIFIC PROPERTIES AND CHARACTERISTICS

We are committed to **QUALITY DOWN TO THE LAST DETAIL.**

### SUPPORT PLATE

Veneered plywood in line with EN 636-2 for use as a load bearing material.

Timber: Special plywood made of beech hardwood veneers, made from ecologically sound, sustainable and locally forested wood for prevention of illegally harvested timber EUTR (EU Timber Regulation), certification in accordance with PEFC with product verification at least "70% PEFC certified", Brinell hardness  $HB \geq 34 \text{ N/mm}^2$ , considerably superior to other woods such as birch in terms of strength, hardness and wear resistance ( $HB = 24 \text{ N/mm}^2$ ).

CE 0765-CPR-0415 (normal flammability) or  
CE 0765-CPR-0420 (flame resistant).

Low emission beech plywood: We are subject to external monitoring by the WKI (Fraunhofer Institute for Wood Research). For this test according to EN 13986:2015, the permissible limit measured according to EN 717-2 for plywood is  $3.5 \text{ mg/m}^2 \cdot \text{h}$ . As we use an extra low-emission special resin, our products have emission values of around  $0.1 \text{ mg/m}^2 \cdot \text{h}$ , which corresponds to less than 3% of the permissible emission limit.

### TOP LAYERS

Beech veneers, quality II/III according to EN 635-2 (other qualities on request), both sides smoothed, directly resined or filmed.

### FINISH

Our products are based on the natural material wood (beech) with all its typical growth characteristics. Uniformity in the surface can thus neither be expected nor guaranteed. The surfaces therefore do as a rule show visual band widths and differences as variations and

flows of the colour and brightness and irregular veneer widths. These appearances are to some extent reinforced by the various surface coatings. Darkening effects are also to be expected.

### STRUCTURE

Symmetrical – Veneer layers coated crossways, parallel middle layers possible.

### INSIDE LAYERS

Beech veneers, large knots and cracks removed prior to glueing.

## GLUEING

EN 314-2 (class 2 for indoor and protected outdoor application as a supporting component in the wet area), optically dark glue joints.

## DIMENSIONS

Max. single surface 2500 x 1500 mm / 2500 x 1250 mm grain direction of the top veneers in the direction of the measurement stated first.

## TOLERANCES

Thickness in line with EN 315, length and width in line with DIN ISO 2768-M, machining tolerances: based on DIN ISO 2768-1 m (medium), different to standard minimum tolerance of +/- 0.7 mm.

## EDGES

Saw cut, edge pattern in accordance with "Inside layers" description, a small amount of filling in may be necessary.

## QUALITY CONTROL

Quality monitoring, quality, tolerances and technical data in accordance with EN 13986:2015.

Formaldehyde emission class E1 (conforming to German Chemicals Ordinance). The dimensions of beech multiplex can change under climate influences.

## FREE OF SILICONE

We have taken precautions to ensure that our **Delignit®- Industrial Floors** do not come into contact with silicone and thus do not emit silicone.

## USEFUL FACTS ABOUT CONDUCTIVITY

**FLOORS** can be divided up into three groups on the basis of their electrostatic behaviour.

### 1. ELECTROSTATICALLY CONDUCTIVE FLOOR (ECF)

Def.: Floor which has a sufficiently low resistance to divert charges quickly if it is earthed.

Resistance  $< 1 \times 10^6$ .

### 2. CONDUCTIVE FLOOR (DIF 2.0)

Def.: Floor which allows a charge to be diverted if it is earthed. Resistance between  $1 \times 10^6$  and  $1 \times 10^9$ . The peak value of the discharge current is lower when compared to the electrostatically conductive floor and the time for the derivation is longer.

### 3. ASTATIC FLOOR (ANTI-STATIC, ASF)

Def.: Floor which does not accumulate electrostatic charge during use. Such a floor is not definitely electrically conductive or capable of conducting away. The voltage must remain below 2 kV.

Electrostatic charge develops through the accumulation of electrons for moving components if potential equalisation (conducting away) to neighbouring components is not possible due to high levels of insulation. In process engineering this fact is used deliberately. For electronic components the static charge can lead to problems. It must be taken into account that even the constant draught of a ventilation system can lead to a static charge.

This static charge must be reduced by suitable conductive coatings of the working and assembly surfaces. The classification of the “suitable, conductive coating”

for various uses and requirements occurs in line with the following standard:

DIN IEC 61340 “Electrostatic behaviour of floor coverings and installed floors”, valid from 1.4.97 is the European standard for electrostatics and it is derived from the German E DIN VDE 0303 part 83. The standard stated describes the requirements set for conductivity, test processes, sample sizes etc. as follows:

The increased use of electronic components in the automotive industry and in the materials handling

technology of the assembly plants for example puts a greater emphasis on the desire for ESD protected areas for work surfaces and industrial floors.

The demand for additional functions for industrial floors in and on assembly surfaces is increasing due to the huge costs associated with rectification of malfunctions. After all around 25 % of all failures of integrated electronic components are down to electrostatic discharges!

Delignit®-Industrial Floor Professional DIF as a pedestal in a worker's conveyor belt.





Delignit®-Professional DIF installed in a conveyor system.

# WORTH KNOWING ABOUT FIRE PROTECTION

## DELIGNIT®- INDUSTRIAL FLOORS

Usage	Comment	Fire protection of the carrier plate with and without bottom side surface coating	Fire protection surface top according to EN9239 hardly inflammable	Product description
supporting floor / raised floor e.g. on a substructure (above a cavity)	For applications with the fire protection requirement „Hardly inflammable“ with fire danger from above and below, e.g. Raised floor, mezzanines etc.	hardly inflammable EN 13501 = B-s1, d0	B <sub>fl</sub> / C <sub>fl</sub>	Delignit®-Industrial Floor Basic / Professional / Professional DIF 2.0 ESH 2.0 / CL-FS on real wood veneer Dark brown / Anthracite synthetic resin
	For applications with the Fire protection requirements „Normally flammable“.	normally flammable EN 13501 = D-s2, d0	B <sub>fl</sub> / C <sub>fl</sub>	Delignit®-Industrial Flooring Classic / Premium ESH 2.0, DIF 2.0 / CL-FS Dark brown / Anthracite synthetic resin
not wearing floor on a non-combustible underground	For applications without special Requirements for fire protection (B2) or when laying on one not flammable surface (concrete surface).	hardly inflammable EN 9239	B <sub>fl</sub> / C <sub>fl</sub>	

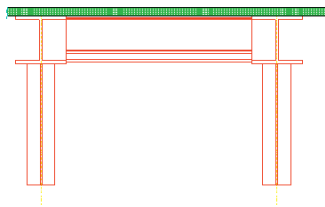


figure 1

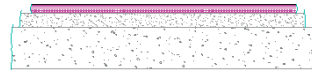


figure 2

Figure 1 shows a load-bearing floor.  
 Figure 2 represents a non-load-bearing floor.

## OVERVIEW OF DELIGNIT®-INDUSTRIAL FLOOR RANGE

**DELIGNIT®-INDUSTRIAL FLOORS** Products always provide the optimal solution - both technically and tailored to the investment volume.

Product name	Main page	Slip resistance according to DIN EN 51130	Abrasion resistance according to EN 438	Dissipative according to EN 61340-5-1	Requirement fire protection (Baseplate)
Delignit®-Industrial Floor Classic	nature	-	-	no	D-s2-d0 according to EN 13501-1
Delignit®-Industrial Floor Classic FS	transparent	R9	270 Taber		
	black				
Delignit®-Industrial Floor Classic FS	brown				
Delignit®-Industrial Floor Classic RO	brown	R11	-		
	grey				
Delignit®-Industrial Floor Classic ESH 2.0	Decor beech	R9	AC 4		
Delignit®-Industrial Floor Premium DIF 2.0	transparent		AC 3 for DIF 2.0	DIF	
	grau				
Delignit®-Industrial Floor Basic	nature	-	-	no	B-s1-d0 according to EN 13501-1
Delignit®-Industrial Floor Basic FS	transparent	R9	270 Taber		
	black				
	brown				
Delignit®-Industrial Floor Basic RO	brown	R11	AC 3 for transparent		
	grey				
Delignit®-Industrial Floor Basic ESH 2.0	Decor beech	R9	AC 4		
Delignit®-Industrial Floor Professional DIF 2.0	transparent		AC 3 for transparent	DIF	
	grey				



# DELIGNIT®-SERVICES

## YOUR ONE-STOP SERVICE PROVIDER

### PRE-SALES-SERVICE

- ▶ Application-related advice
- ▶ Product development  
(incl. special superstructures, surfaces)
- ▶ Preparation of product documentation  
(incl. certification)
- ▶ Project management (incl. CAD, layout, statics)
- ▶ Provision of prototypes and samples
- ▶ Offer service

### DELIVERY AND ASSEMBLY SERVICE

- ▶ Production and delivery "Just in time"
- ▶ Installation "Just in time" / installation instructions
- ▶ Provision of project documentation  
(including certificates)
- ▶ Product certification  
(including measurement of the conductivity)

### ACCESSORIES SERVICE

- ▶ Special accessories  
(including BHI-DIF circular blanks)
- ▶ Special fastening technology  
(including self-locking screws)
- ▶ Maintenance accessories (including rotary and fold-down handles, compression screw caps, Plexiglass windows, maintenance flaps)

### AFTER-SALES-SERVICE

- ▶ Smart Repair (repair set)
- ▶ Implementation of repair measures

### CERTIFICATIONS / APPROVALS

- ▶ Quality management: ISO 9001
- ▶ Sustainability: incl. PEFC
- ▶ Energy management: ISO 50001
- ▶ EUTR (EU Timber regulation)
- ▶ Bonding certification: DIN 6701, class A2
- ▶ Environmental management: ISO 14001
- ▶ CE marking
- ▶ Product certification: i.a. conductivity, Fire protection, slip resistance



## VALUED SYSTEM SUPPLIER – THE DELIGNIT® COMPLETE PACKAGE

**LEADING SUPPLIER** of technical products and system solutions based on Delignit®, an environmentally friendly material.

As an established manufacturer of wood-based materials, we act as a system supplier for durable floors and other construction solutions for harsh industrial environments. We cover the entire spectrum from development and application technology to material production, finishing and system component assembly, through to logistics and after-sales. In the development of new solutions, we work closely with our customers.

Thanks to our manufacturing know-how and expertise in material, application and system technology, we are able to offer products that combine various properties and parameters. Our customers thus have the option to obtain tailor-made solutions from a single supplier.

Our quality management system is certified according to DIN EN ISO 9001. As part of our

quality management, we constantly assess the quality of our products with a view to continuous improvement. This approach enables us to achieve the best possible solution for any application and the highest level of customer satisfaction.



## THE GUIDING PRINCIPLE BEHIND DELIGNIT®

**SINCE 1893. MADE IN GERMANY.** Leader in beech plywood technology.

- ▶ **Delignit®** has its origins in beech hardwood veneer and comes in panels.
- ▶ **Delignit®** is an environmentally friendly construction material for custom-engineered system solutions.
- ▶ **Delignit®** is available for just-in-time delivery in fully finished and assembled units.
- ▶ We develop and produce **Delignit®**.



Blomberger Holzindustrie premises at the time of its first expansion; left: office and factory buildings dating from 1907; right: villa built in 1902

## BY USING WOOD, WE PROTECT THE FUTURE OF OUR PLANET - THINK NATURE - THINK DELIGNIT®

Wood is a unique renewable material and energy resource. In contrast to other materials, it is CO<sub>2</sub>-neutral over its life cycle. When disposed through incineration, the same amount of carbon dioxide is released as the tree absorbed over its lifetime.

First and foremost however, wood is an important carbon sink. By turning beech lumber into **Delignit®**

plywood, CO<sub>2</sub> is eliminated from the atmosphere and stored in the material: one cubic metre of **Delignit®** plywood contains approx. 350 kg of carbon dioxide. This corresponds to a CO<sub>2</sub> equivalent of around 1.3 tons. The locally sourced beech lumber from which **Delignit®** is made is among the toughest and most durable timbers available.

It weighs just 1/10 of structural steel, but offers 1/3 of its strength. The beech round lumber used in the production of **Delignit®** is sourced from local, responsibly managed forests. These are forests in which much more wood grows than is harvested within a given period of time.



We produce according to German, European and international standards and certification systems. Our customers therefore know that they can at all times rely on the product quality and operational safety of Delignit<sup>®</sup>, as the material meets the highest standards.

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