

PRODUCT DATA SHEET

Delignit®-Panzerholz® for technological applications

A DIN 7707-compliant hardened panel material made of a combination of synthetic resin and hardwood with a hardened structure.



Technical data (average values)

| Delignit®-Panzerholz® Type Type designation in accordance with DIN 7707 | | B15 KP 20226 | Delignit®-Panzerholz® - Type Type designation in accordance with DIN 7707 | | B15 KP 20226 |
|-------------------------------------------------------------------------------|----------------------|-----------------|----------------------------------------------------------------------------------------------------------------------|---------------------------------|-------------------------------------------------|
| Gross density g/cm³ DIN 53 479 | | 1,35 – 1,40 | Gap load N DIN 53 463 | ⊥ layer II layers | 3.000 |
| Flexural strength N/mm² DIN 53 452 | II layers ⊥ layer | 165 180 | Shear strength N/mm² | II layers ⊥ layer | 10 60 |
| Impact resistance kJ/m² DIN 53 453 | II layers ⊥ layer | 25 50 | Elasticity module N/mm² DIN 53 457 - bending GIN 53 457 - pressure | ⊥ layer ⊥ layer II layers | 17.000 2.600 6.000 |
| Notch impact resistance kJ/m²⁺ DIN 53 453 | II layers ⊥ layer | 20 50 | Sliding friction coefficient·μG Against blank stainless steel plate II and against E 200 belt tensioner | ⊥ layer II layers | 0,2 – 0,3 0,14 |
| Tensile strength N/mm² DIN 53 455 | II layers | 125 | Water uptake in %³⁾ after 24h storage in water (specimen: 50 x 50 x 30 mm) DIN 53 495 | | 3,5 |
| Compressive strength N/mm² DIN 53 454 | II layers ⊥ layer | 135 270 | Heat coefficient W/mk (for temperatures from -20 to +40°C) ⁵⁾ | | 0,29 – 0,32 |
| Bullet indentation hardness N/mm² DIN EN ISO 2039-1 | ⊥ layer | 230 | Dimensions (mm) (other sizes up to 5,900 x 530 mm on request) | | 2,130 – 1,000 1,800 – 1,220 1,220 – 1,220 |

Caution: For more demanding requirements please see our Delignit®-Protect 2.0 compound material for higher bullet resistance classes.

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| Processing: | Panzerholz [®] contains no metal inserts and can therefore be processed with normal carpentry machines (carbide cutting edges). Panzerholz [®] is threaded (3x thread diameter). The screw pull-out resistance is 10 times that of pinewood and three times that of oak. |
| Explosion resistance: | As from 35 mm sheet thickness for a DM51 hand grenade with an amplified explosive charge (5 cm distance) |
| Product design | 1.8 mm thick beech veneers are compressed under high pressure to approx. 0.9 mm. |
| Thickness: | 4 – 100 mm and thicker sheets glued together from partial thicknesses |
| Tolerances: | + / - 1 mm in Length and Width - 0 / + 0,6 mm in thickness |
| Surfaces: | Irregular dark colouring without optical demands. |
| Quality assurance: the | Quality and technical data in accordance with DIN 7707. Formaldehyde emissions class E05 (corresponds to regulations of the Chemicals Ordinance). |
| Delays: | Freedom from distortion is not an assured feature. For more demanding freedom of distortion requirements, thicker sheets can be made from partial thicknesses to minimise possible warping. |
| Storage: | Under certain conditions, our beech-based Delignit [®] special materials can react to climatic influences such changes in humidity and temperature with changes in shape (swelling up, shrinking and distortion). Specifically, it is not to be expected that our materials are free of distortion and we therefore cannot guarantee this. We must therefore expressly exclude any complaint on the basis of distortion. Please observe our processing and handling instructions for our products at www-delignit.com |

- 1) The longitudinal axis of the test specimen runs parallel to the main grain direction.
- 2) The longitudinal axis of the test specimen runs at right angles to the main grain direction.
- 3) Thicker test specimens can result in lower, thinner samples and larger percentual water absorption. Delignit[®] Panzerholz[®] can swell up as a result of damp.
- 4) Values deviating from DIN 7707 for gross density, bullet indentation hardness and the E-module.
- 5) Thermal conductivity for temperature range -50 to -196°C on enquiry. Solidity and E-module grow at temperatures below zero.