lisocore®

The sustainable High-Performance Board!

Product Information and Processing Recommendation

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1 Storage & Transport Instructions

lisocore® panels are delivered with protective boards (top and bottom) and palletized with spacers underneath.

Maximum height of the pallets for

- Transport by truck: ≤ 1.150 mm (= max. stacking height of the panels: 1028 mm)
- Transport by container: ≤ 1000 mm (= max. stacking height of the panels: 878 mm).

Thus, two pallets can be transported on top of each in the truck or container.

When using tension belts to secure the load, make sure that the tension force is adjusted properly to the hollow structure of the panels. The slabs must not slip during the transport and not be damaged as a result of excessive tension.

A storage location which is protected from weather and not exposed to large fluctuations in temperature and humidity is recommended. Due to the hollow structure, moisture can quickly penetrate the entire stack of panels. Before further processing, the boards should be conditioned. Up to five pallets can be stacked on top of each other. The spacers should lie directly on top of each other.

2 Processing Instructions

Due to its high internal bond strength, lisocore® can be machined on standard woodworking machines.

2.1 Cutting

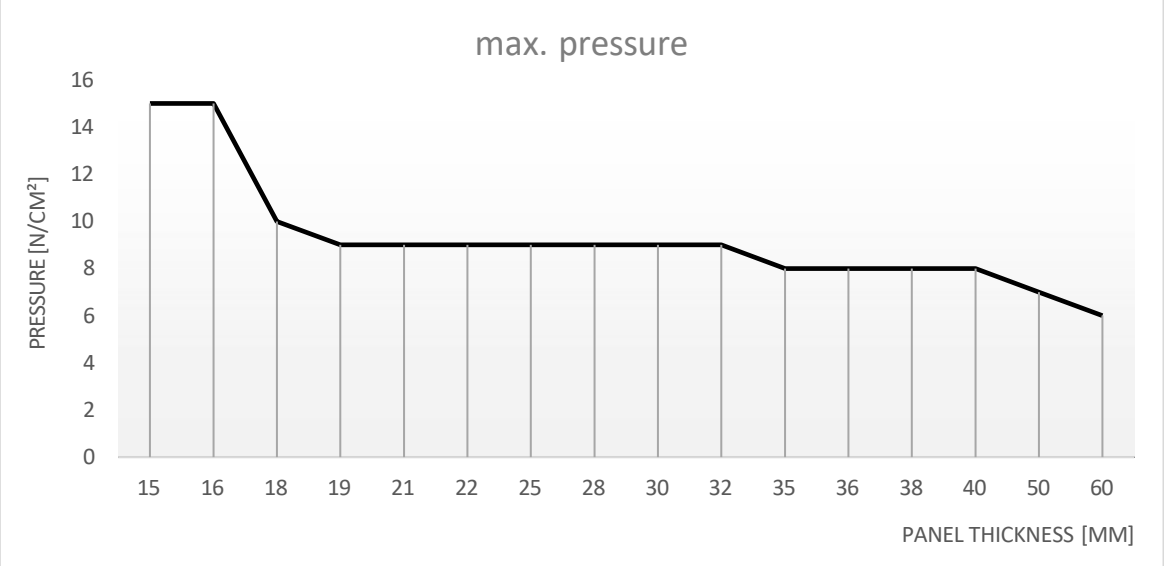
Cutting is possible on common panel saws (vertical and horizontal). For saws that use clamping devices such as pressure beams or collets, make sure that the force or pressure is adjusted according to the lisocore® panel. Excessive pressure from the clamping device could damage the panel.

Unique feature of this sandwich panel:
The continuous connections between the core and the cover layers, allows free cutting! Therefore, no attention has to be paid to the course of the core structure when cutting!

2.2 Surface Coating

Subsequent surface coating of lisocore® is possible with sheet- or roll material on short-cycle and veneer presses or calender presses.
It must be ensured that the adhesive is applied in the quantity actually needed for bonding. A generous application of adhesive promotes an uneven surface, especially with thin, uni-colored, or glossy coatings. The reason for this is the punctual support of the cover layers by the core structure. Due to the coating pressure, the adhesive is displaced more strongly in the areas of the core tips than in those without. After the coating process, this can result in a visible pattern on the surface corresponding to the position of the core tips.
For smaller components we recommend using spacer bars in the press. In the case of calender presses, in order to determine the optimum contact pressure of the rollers, you can start with an undersize of 0.1 mm. If the undersize is adjusted too high, the board can be damaged, or the core structure may be drawn off on the surface.

Following illustration shows the maximum pressure depending on the panel thickness:



In general, the coating pressure should be reduced when processing lisocore® in order to avoid damaging the panel!

2.3 Edge Banding

The coating of narrow surfaces of lisocore® is basically possible with all established processes. The use of a support edge is not mandatory. lisocore® has a significantly reduced cross-sectional area, which is available as a bonding surface.
We recommend doing processing tests in advance and considering the following points:

Edge band:
Depending on the panel thickness, the use of appropriately strong edge bands is recommended. For thinner lisocore® panels, the use of at least 1.5 mm thick edge bands is recommended. For thicker panels, edge bands from 2.0 mm are suitable.

Edge bands that are too thin, could result in a visible pattern of the panel interior on the edge band surface.

Adhesive:
We recommend the use of PUR adhesives.
Possible adhesive types are:

- Henkel Technomelt 270/7
- Jowat Reaktant 608.0
- Kleiberit

(Due to the reduced adhesive area, EVA type glues are less suitable)

Settings of the edge banding machine:
Please reduce the contact pressure of the milling units as well as the upper pressure belt. Exceeding pressure could compress the lisocore® panel in the narrow surface.

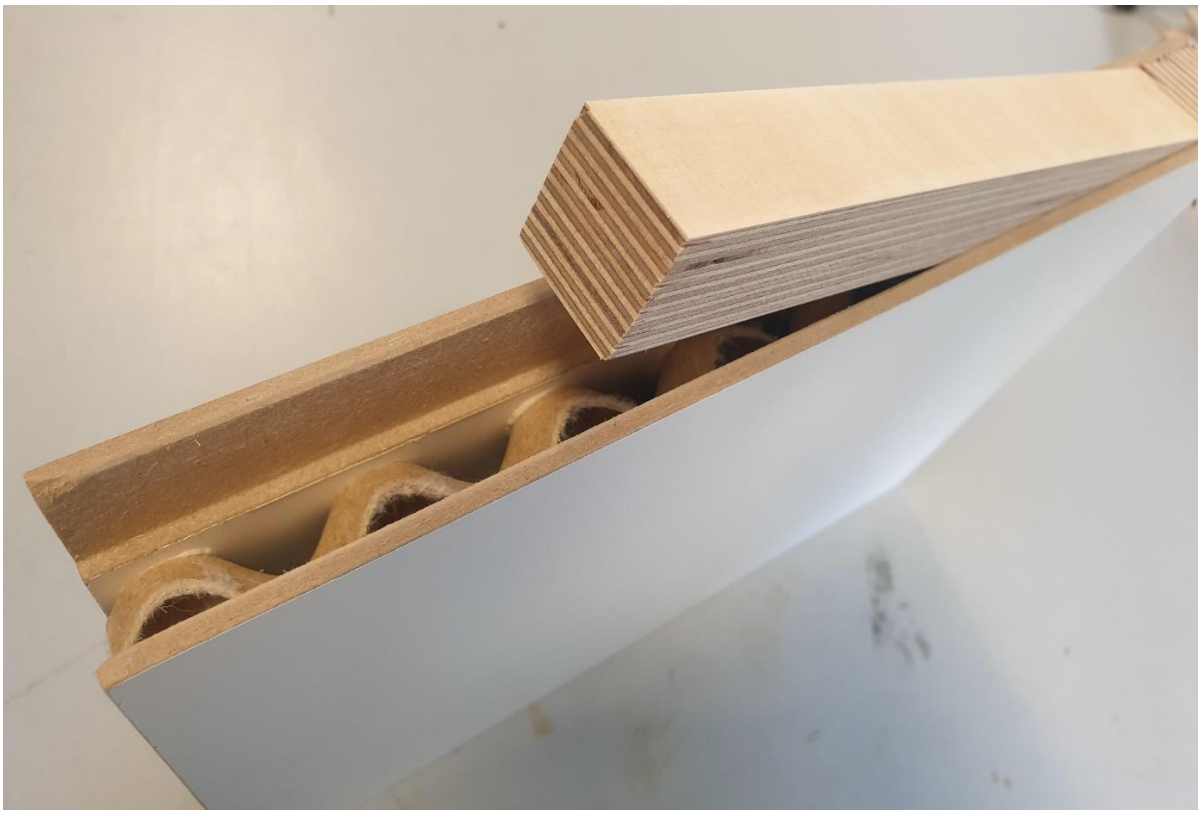
2.4 Drilling & Milling

Drilling, milling, and nesting of lisocore® is possible on common machining centers with standard tools.

To achieve a clean cut on the top and bottom of the cover layer, the tool should be adapted to the respective cover layer material.
A big tool diameter and an axis angle with tension show optimal results. Especially when nesting in plywood cover layers, a high rotational speed and feed rate is recommended in order to obtain a clean milling pattern.

2.4.1 Inserts

Subsequent rebating of an insert provides optimum stability for using special connectors or fittings in the lisocore® panel.



3 Connection & Fitting Technology

The insertion and fastening of connection and fitting technology is possible by using clamps or standard screw systems. lisocore® panels have a high internal bond strength. Therefore, fastening standard screws (such as Spax, Euromat and Varianta) into just one cover layer is often sufficient!

3.1 Blind Rivet Technology

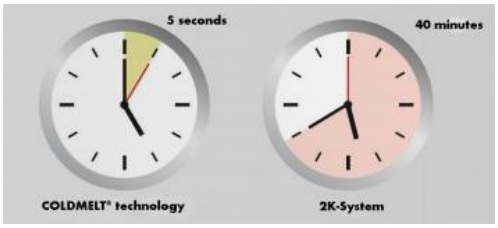
With the aid of this technology, high strength screw fastening points, which allow multiple dismantling, can be inserted into lisocore®. Blind rivet nuts are available in several metric thread sizes such as M4, M6, M8, M10. These are set with the help of path- or power-controlled tools into one cover layer only.

3.2 Cold Melt®-Technologie

3.2.1 Technology

Thanks to the Cold Melt® Technology from Adolf Würth GmbH & Co. KG, high strength fastening points can easily be set into lisocore®. In addition, corner connection systems, which are needed in the furniture- and caravan sector, can be implemented.

This technology enables adhesive-free insertion of variably positionable plastic adapters. Cold melt dowels are set in motion by vibrations in the ultrasonic range. The sonotrode of the hand tool transmits 25000 vibrations per second. The resulting friction heat between the material and the dowel enables merging. In just a few seconds a high-strength and immediately loadable connection is created.



3.2.2 Special Drill Bit

The necessary drill bit consists of two separately available elements. The fixed main cutting edge and the variably adjustable secondary cutting edge guarantee a perfect fit of the plastic dowel inside lisocore®.

Special drill screw connections

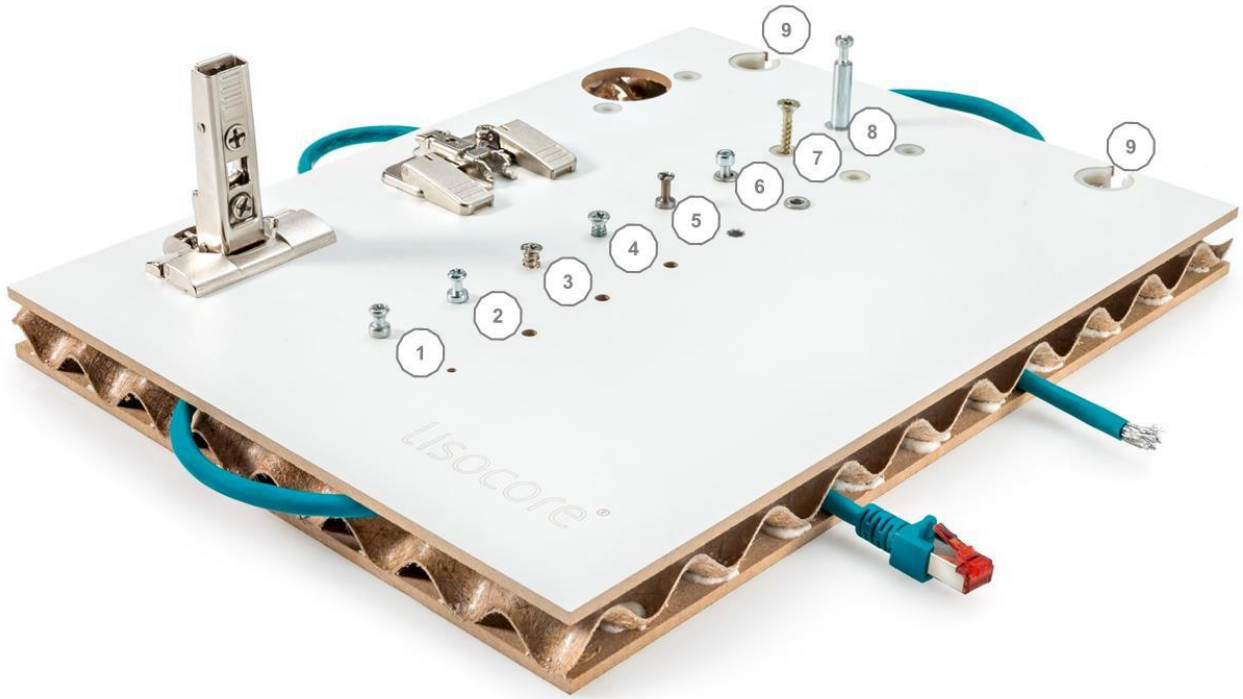
Special drill cam fitting

Push-on countersink f. drill (screw/ cam fitting)

3.3 Fitting Technology

Common hinge systems and mounting plates for screwing or clamping can be used with lisocore® panels. For panels with 4 mm top layers or thicker, fittings for clamping may be sufficient. With 3 mm top layers, additional fastening measures are likely to be necessary. For example, fittings with screws can be used, or additional aids can be inserted into the panel where the fitting is mounted, such as cold-melt dowels or blind rivets or other inserts.

Another option for e.g. corner connections is the Clamex connector from Lamello®. It can be attached into the surface and the narrow surface if an insert has been placed in advance.



4 Integration of technology into the panel

lisocore® is not only a strong and lightweight panel, but also offers the possibility to integrate technology into the panel!
Cabling can be laid longitudinally, transversely and diagonally in the cavities inside the panel.

This offers completely new design possibilities, for example, in the case of motorized furniture control units, motors and operating elements can be hidden inside the panel!

5 Cleaning & Care

Coated lisocore® surfaces can be cleaned (depending on the type of coating) using water and gentle cleaning agents. Cleaning agents, cloths and sponges which contain abrasive components should be avoided. For the removal of persistent soiling, normal cleaners for plastic surfaces can be used. Before first use, we recommend testing on a non-visible area.

6 Disposal

It is advisable to recycle the material or use it for energy in facilities approved for this service.
Within the European Union, waste is classified according to the waste code in the European waste catalog.
Outside the European Union, disposal must be carried out in accordance with national law.

If you have any further questions about the processing of lisocore®, please do not hesitate to contact us!

Please get in touch with your contact person
or verkauf@pyrus-panels.com!

We are happy to answer your questions!

PYRUS PANELS

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