SLATE LITE™

INSTRUCTIONS FOR USE: Pressing on carrier materials

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For some areas of application, e.g. furniture, it may be necessary to apply Slate-Lite to a carrier material. Among other things, this can be a wooden board (MDF or similar).

1) PREPARATION

First, make sure you have all the tools and materials you need:

The following carrier materials can be used:
- Chipboard according to DIN EN 309
- Plywood board according to DIN EN 313
- MDF according to DIN EN 316 (from 6 mm)
  Black-dyed MDF for heavy-duty use
  Only 1 - 2 mm surface stained MDF for low loads
- Blockboards
- Multiplex (stable & heavy) / available in 4 mm - 80 mm
- Packing layer plates
- HDF (similar to MDF), everything up to 4 - 5 mm is HDF
- Wet room panels for wet rooms
- PU or compact layer boards for wet and outdoor areas

The thickness of the carrier material should be at least 15 mm.

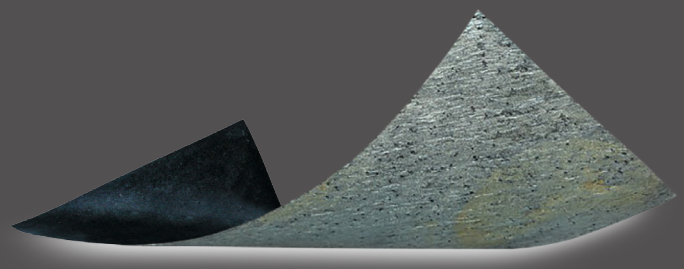
2) OPERATING PROCESS BEFORE PRESSING

First apply the appropriate adhesive to the carrier material on which Slate-Lite is to be pressed according to the respective processing instructions.
For this, e.g. following adhesives:

- Spray adhesive: Is mainly used for EcoStone when it is pulled directly around the corner
  Use e.g. our EcoStone contact adhesive or the
  Spray contact adhesive DS 770 from ASK.
- PU glue: Used for heavily used areas such as kitchens and wet areas.
  Use e.g. our Slate-Lite PU or the
  PU wood adhesive D4 PU 30 minutes from Soudal.
- White glue: The fastest and cheapest option is used indoors where the stress is least on the material and glue.
  Use e.g. the D3 glue Jovakol 685.12 from Jowat.
  (D4 glue is produced when mixed with Jowat crosslinker 195.40 (5%).)

After applying the adhesive, a backing paper is first applied. This is imperative because the natural stone surface of Slate-Lite behaves and works differently than wood. In this way, the warping or bowling of the carrier plate is prevented.

SLATE LITE™



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We recommend the use a counterweight paper of approx. 120 g / m². Alternatively, a laminate (HPL) can also be used. Although these are more expensive, they are also more stable and are particularly suitable for furniture construction (e.g. kitchen fronts). Various structures are also available for selection here.
The appropriate adhesive can then be applied to the back of the carrier plate.

Then place Slate-Lite on the carrier plate and fix the slate sheet by pressing it lightly with your hand.
ATTENTION: Precise processing of the carrier plate, backing paper and Slate-Lite is particularly important to achieve an excellent result!

3) PRESSING

Once all the steps from the previous processes have been carried out precisely and carefully, the prepared plate can now be placed in the joiner‘s press.

In general, the pressure should be between 30 - 80 N / cm².
However, the pressure depends on many different factors:
How many pressure cylinders are there? How big is the plate to be pressed? Etc.
Please check this variable information individually for your project before each pressing process.

Specific pressure 3.6 km / cm². The specified values can be read on the manometer.

Pressure table: 4 cylinders

B/L	30	40	60	80	100	125	135
60	20	30	40	60	70	80	90
70	25	30	45	60	80	90	100
80	25	35	50	70	90	100	105
90	30	40	60	80	100	120	125
100	35	40	65	85	105	130	140
105	35	45	70	90	120	140	150
110	40	50	75	100	125	150	165
115	40	55	80	110	135	160	175
120	45	60	85	120	145	170	190
125	45	65	90	125	160	180	200
130	50	65	100	120	165	200	215
135	55	70	105	140	180	210	225
140	55	75	110	150	185	220	240
145	60	80	115	160	200	230	250
150	60	85	120	165	205	245	265
155	65	85	120	170	210	255	280

Pressure table: 6 cylinders

B/L	30	40	60	80	100	125	135
60	20	30	40	60	70	80	90
70	25	30	45	60	80	90	100
80	25	35	50	70	90	100	105
90	30	40	60	80	100	120	125
100	35	40	65	85	105	130	140
105	35	45	70	90	120	140	150
110	40	50	45	100	125	150	165
115	40	55	80	110	131	160	175
120	45	60	85	120	145	170	190
125	45	65	90	125	160	180	200
130	50	65	100	130	165	200	215
135	55	70	105	140	180	210	225
140	55	75	110	150	185	220	240
145	60	80	115	160	200	230	250
150	60	85	120	165	205	245	265
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(Tab .: Example print table)

You can obtain information on the press and post-curing times directly from the adhesive manufacturers. For a PU adhesive, the pressing time is about 1 - 1.5 hours and a temperature of 50 ° - 70 ° C.

ATTENTION: It is particularly important that a wood insulation fibreboard is placed between the stone surface of Slate-Lite and the press to evenly distribute the press pressure and to protect the press and the material. This is due to the natural, uneven structure of the product.
The use of a silicone mat on the stone surface should be avoided, as this will contaminate the material or residues may remain on the surface.

SLATE LITE™

INSTRUCTIONS FOR USE: Pressing on carrier materials

4) PROBLEMS THAT CAN OCCUR

If too much glue is used (especially with PU glue), dents can form after pressing. These dents can also burst due to the surface tension in the material. This can also happen about 4 - 5 days after pressing! In order to avoid the formation of these dents, the carrier plate should be moistened briefly before the pressing process, as the glue required is otherwise too high and PU glue cures due to atmospheric moisture.

The PU adhesive should also be applied with a fine toothed spatula so that not too much adhesive is applied.
ATTENTION: PU glue foams, therefore glue should not be poured immediately - rather spread the foamed glue carefully a little more on the adhesive surface.

Due to the surface tension, the Slate-Lite team ensures that the back of the material is as flat as possible for the pressing process.

By the way: Slate-Lite is generally better suited for pressing, since EcoStone can pull out more when trimming due to the cotton backing.

5) PREPARATION & CUTTING

After the pressing time, the material can be removed from the press and cut. The excess of backing paper and Slate-Lite can now be removed.

CUTTING: The maximum size that can be cut is 430 x 430 cm, up to a height of 60 mm.
Slate-Lite can only be cut in one layer, since there is a risk of the material tearing out and unsightly edges.

We recommend using a format saw or CNC saw for all non-rectangular cuts! When cutting, a waste of around 4.3 mm per cut must be expected due to the saw blade thickness.

To achieve a better result, the plate is usually cut 20 mm larger than required and only then pressed. Only after this process is the plate cut to the correct size.
Our carpenter can calculate the amount of sheets required in advance if a corresponding table with the dimensions and the number is sent.

SLATE LITE™

INSTRUCTIONS FOR USE: Pressing on carrier materials

By the way: Our Slate-Lite edges also work with an edge machine!
Here it is best to work with hot melt adhesive or PU adhesive (the PU adhesive lasts even better (e.g. for aluminum edges, more suitable for kitchen and wet areas).

It is possible to calibrate the plate = face grinding (3 mm - 20 cm), surface grinding, sanding down the thickness. This enables more precise strengths when pressing the material.
The edges of the material should be sanded after cutting so that the saw cut is no longer visible. However, care should be taken not to grind too much!

By the way: The larger the size gets the more chance there is of the sheet slightly shifting a few mm during the press process.

SQUARE SAW:
The sliding table saw is suitable for oblique cuts or miter cuts. Material that has already been mitred is particularly sensitive during transport and the risk that it was not properly measured is very high. It is therefore recommended that such cuts are always made on site.

CNC MILLING:
With the CNC milling machine, bevels, cutouts and bores are easily possible.

The Slate-Lite plate is attached to a carrier with double-sided adhesive tape and then processed with the thinnest possible milling head (approx. 6 - 8mm). This is particularly important because the resistance is lower and the material can tear out with thicker milling heads.

Oversize: 1 - 2 mm
Accuracy: 1/10 mm
Bores: 1 - 2/10 mm
Drawing or sketch is mandatory
1.25 x 3.20 m (max. Processing size) height max. 10 centimeters

The resulting plate can now be processed further.

R&D GmbH | Boschstraße 12 | D-53359 Rheinbach | Tel. +49 (0)2226 – 82 999 30 | info@slate-lite.com | www.slate-lite.com

SLATE LITE™

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6) PROCESSING A JOINER'S CORNER

The further processing of the above-mentioned plate may provide that the corners and edges of the piece of furniture are also covered with the material.
For this, the plate can be cut to the appropriate angle (45 °) with a miter saw. A miter cut is not absolutely necessary. Great results can also be achieved with a straight cut.

Now both sides of the edge must be brought together. The best way to do this is to first put both edges together as precisely as possible at the cut edges. The stone surface should be the visible side.

Once this has been done, both plates should be fixed with an adhesive tape. This means that any unevenness in the stone, in the material itself or by cutting to size can be repaired in advance.

The fixed panels must now be turned over carefully so that both edges can be generously coated with white glue and then brought together. Here, too, you should use adhesive tape to first fix the plates.

It is particularly important that the adhesive tape for fixing the material only remains on the material for a short time (until the white glue picks up). Longer sticking of the adhesive tape on the stone surface can lead to residues of the adhesive tape which have to be laboriously removed.