

Test Report AQUA-STOP-PEN

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Test description:

Sealing of glue lines by the use of AQUA-STOP-PEN

Aims:

To protect furniture in moisture sensitive areas effectively, Doellken has launched on the market an innovative system solution – the AQUA-STOP-PEN. In this instance, the AQUA-STOP-PEN was tested in conjunction with conventional edgeband application to seal the joints.



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Production of test specimen

MACHINE PARAMETERS:			
Machine/Type	Homag Optimat KAL 310/7/A20/S2		
Processing speed	: v =	24	m/min
Adhesion:	<u>Glue roller</u>	<u>Pressure setting</u>	<u>Infrared heater (3,2 kW)</u>
	<input type="checkbox"/> Ribbed applicator: 1,6mm	1 x Main pressure roller	<input type="checkbox"/> an <input type="checkbox"/> on
	<input checked="" type="checkbox"/> Ribbed applicator: 1,1mm	6 x Secondary Pressure rollers	<input checked="" type="checkbox"/> aus <input type="checkbox"/> off
Panel material:	<input checked="" type="checkbox"/> MFC Chipboard	<input type="checkbox"/> MDF	Egger
Hot melt adhesive:	Type:	Jowat 280.30	Temperature: 180°C
Panel joint milling:			
LEUCO-DIAMAX 181241, 125x63/64,6x30, Z 3+3, DP, Pa.189, MEC, DKN 8x3, n=9.000 min-1			
Capping saw:			
LEITZ-156006986, WK 250-2, 120x3,6/2,8 Z24 / 15,71, Gearing with positive cutting angle, static keying,			
Edgeband flush milling:			
LEUCO-DIA, 20°-Chamfer milling cutter HSK25, Z4, MEC, n=12.000min-1			
Glue joint-flat scraper unit:			
LEUCO-Topline, hard metal			

Test procedure

1. Using the same production process and parameters, a Doellken edgeband was applied to six directly coated chipboards.
2. The joint area of three panels was sealed with AQUA-STOP-PEN and then dried at room temperature.
3. Afterwards, all six panels were put with the narrow surface into a water-filled container for 24 hours.
4. Subsequent evaluation of the results.

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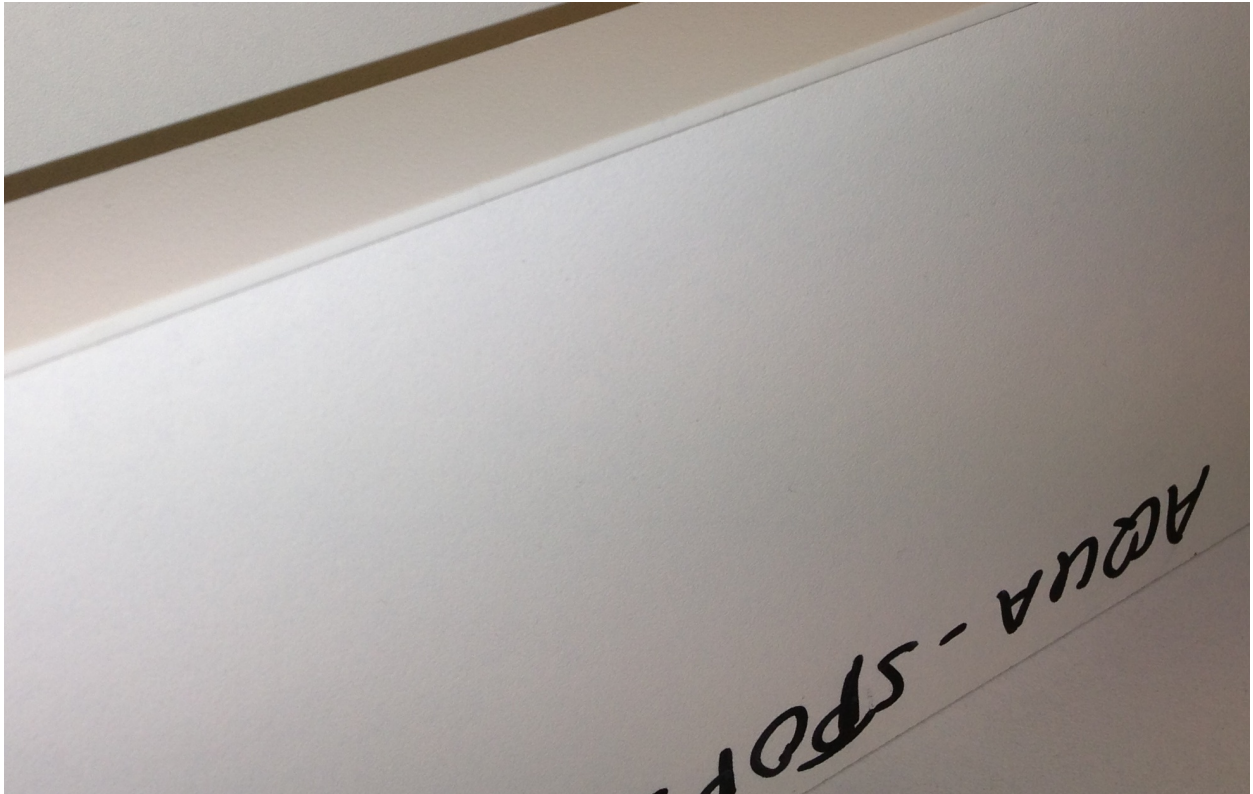
Components without AQUA-STOP-PEN



- Even after a few hours in the water a considerable swelling in the joint area is recognisable.
- The panel is irreversibly damaged.

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Components with AQUA-STOP-PEN sealing



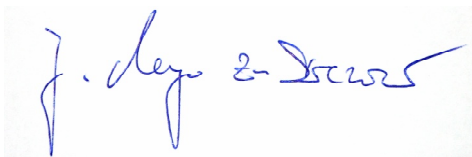
- After 24 hours in the water there was **no** noticeable swelling in the protected joint area.
- The furniture component remains **free** any damage.
- Further tests show that higher loads are possible.

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Final Assessment

- Components which were not sealed with the AQUA-STOP-PEN show along the entire longitudinal edge swelling of the panel thickness of approx. 2 mm.
- Components sealed **with** the AQUA-STOP-PEN show **no** swelling.
- Thus, the effectiveness of the AQUA-STOP-PEN even in extreme conditions was successfully demonstrated.
- The results depend on the manufacturing conditions of the panel components and the materials used.

The above demonstration and our application-technical advice in spoken and written are based on our experiences and are made to the best of our knowledge and belief, however, they must be regarded as non-binding information without guarantee. Otherwise, current general terms of business, delivery and payment of Döllken-Kunststoffverarbeitung GmbH apply.



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