

Testreport 17.005

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Task / Problem / Requirement:

Testing shear strenght according to EN 302-1

Sample materials / Manufacture:

Manufactured by Jowat Swiss AG

Adhesive	Jowapur [®] 683.11 / 685.13		
Substrate	MGO Board to Steel MGO Board to MGO Board M;GO Board zo plywood	Pre-treatment	dedusting
Application method	Flat application 180g/m ²	Climatic conditions	22°C / 43% rel. H.
Test speed	3 mm/min		

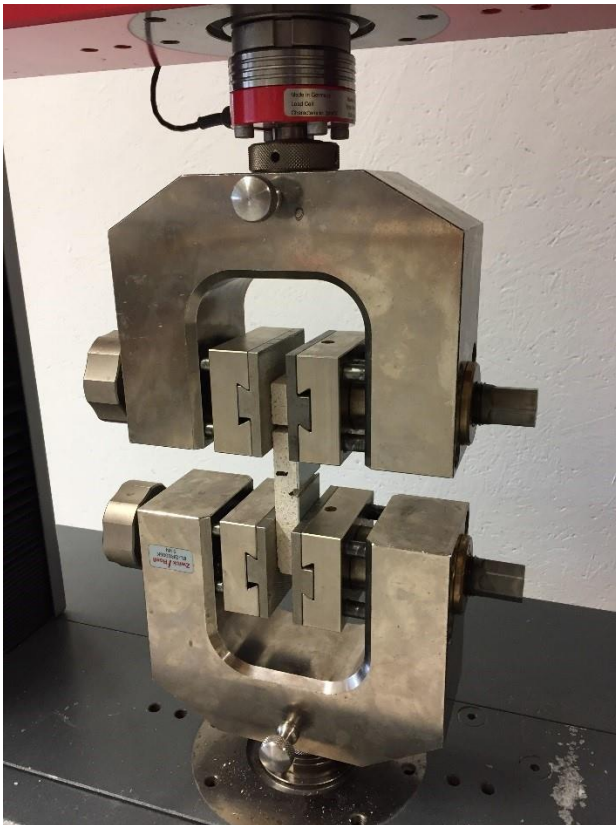
No	Substrate 1	Substrate 2	Adhesive
1.1	MGO board	Steel	683.11
1.2	MGO board	Steel	685.13
1.3	MGO upside	MGO upside	683.11
1.4	MGO upside	MGO upside	685.13
1.5	MGO sanded	MGO sanded	683.11
1.6	MGO sanded	MGO sanded	685.13
1.7	MGO board	plywood	683.11
1.8	MGO board	plywood	685.13

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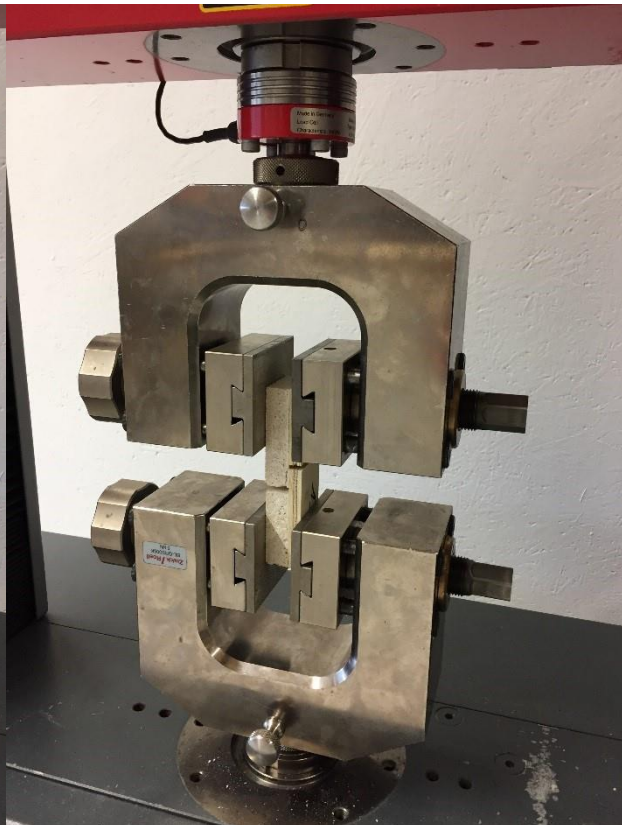
Results

No.:	Shear strenght [N/mm ²]	Standard deviation	Number of test sample
1.1	0.2	0.1	1
1.2	0.2	0.4	2
1.3	3.2	0.5	4
1.4	3.4	0.5	3
1.5	1.29	0.7	4
1.6	1.73	0.3	4
1.7	2.32	0.6	5
1.8	2.81	0.5	5

Pictures

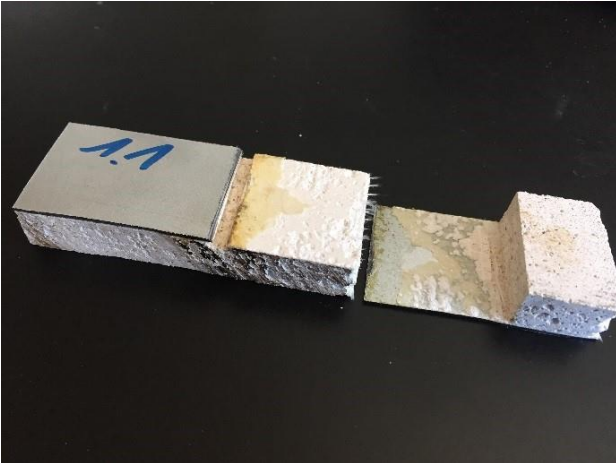


Picture 1: Testing Zwick P100

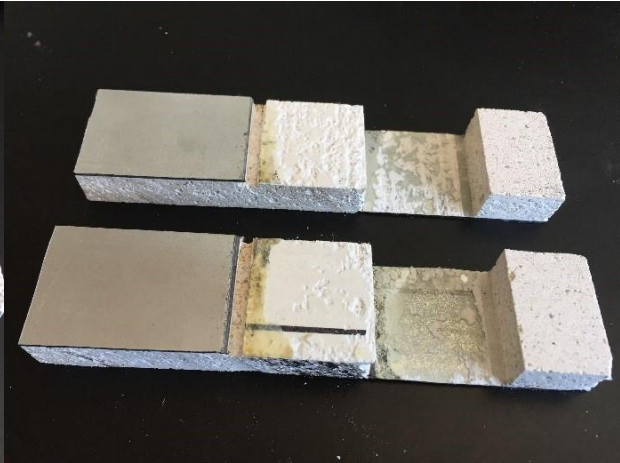


Picture 2: Testing Zwick P100

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Picture 3: testsample 1.1



Picture 4: testsample 1.2



Picture 5: testsample 1.3

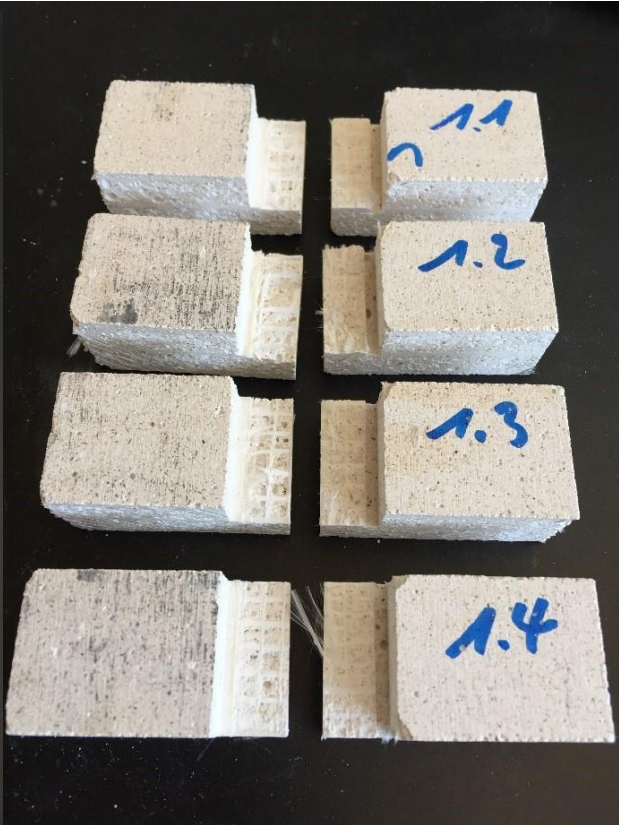


Picture 6: testsample 1.4

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Picture 7: testsample 1.5



Picture 8: testsample 1.6



Picture 9: testsample 1.7



Picture 10: testsample 1.8

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Analysis /Conclusion:

- 1) The test is showing that the MGO-board can be bond with these two adhesives generally
- 2) To test the connection between the steel panel and the MGO board is very difficult, because of the flexibility of the steel panel. When we get it in the testing machine, some layers of the MGO board lose the connection itself because of the flexibility of the steel panel.
- 3) The connection between MGO to MGO is quite good, the material was broken itself.
- 4) The conecction between timber and MGO is alo good. Here is the test also showing material failure.

The obtained results are correlated to the specimen placed at our disposal and, if the bonding was done by us, to the specimen bonding produced by us. The adhesives as well as the raw materials can fluctuate within defined specifications; therefore the values of the results can also fluctuate. They are therefore not an assurance of the properties in accordance to the BGer law.

CH-Buchrain, 21.07.2017

Christoph Zumstein