

Task

Peel test - Glue thickness

Customer

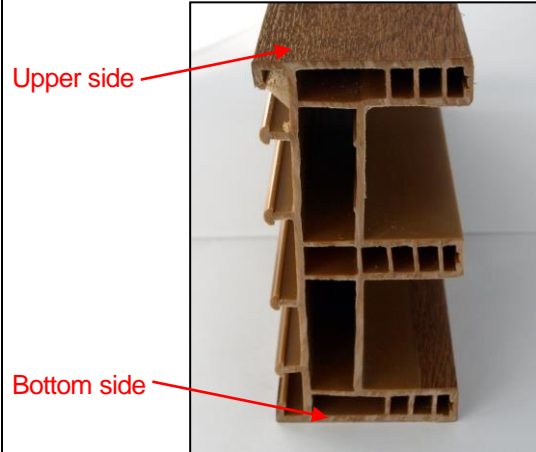
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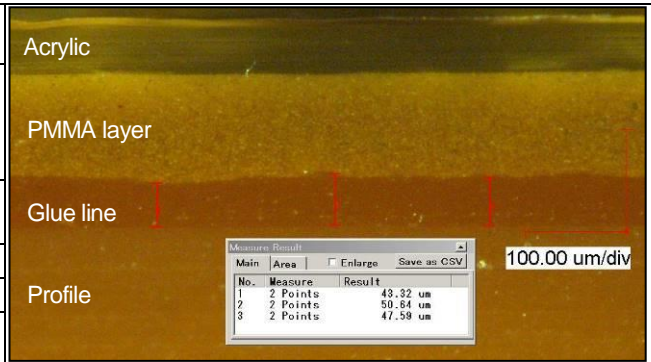
Test material 1

Date of test 22th of September 2016
Foil type **RENOLIT EXOFOL FX**
Decor Golden Oak 9.2178 701 – 116701
FO-ID 105729013
Profile material PVC
Glue TAKA 1308.1
Primer bottom side TAKA 171
Ambient temperature 29 °C
Humidity 73%
Profile temperature 29 °C
Profile temperature after heating 45 °C
Temperature of glue 144 °C
Amount of glue 58 g/m²
Temperature of the foil 42 °C
Laminating speed 14 m/min



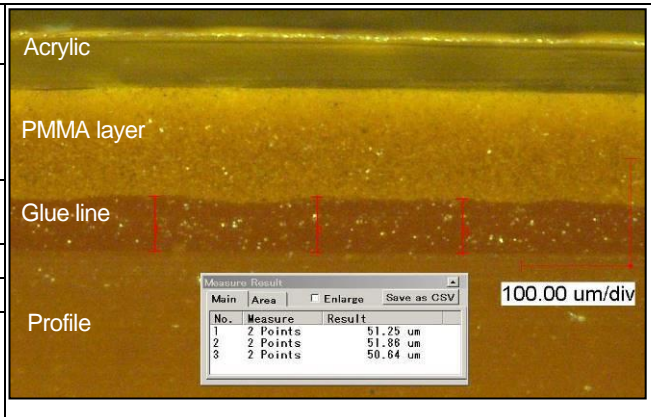
Result - Upper side

	Requirement	Result
Peel test after X d [N/mm] According RAL - GZ 716	minimum 3.0	4,3 (Foil break)
Visual inspection of the glue		OK
Cross - section		
Thickness of glue	40 – 60 µm	43 – 51 µm
General visual inspection	Ok	



Result - Bottom side

	Requirement	Result
Peel test after X d [N/mm] According RAL - GZ 716	minimum 3.0	4,4 (Foil break)
Visual inspection of the glue		OK
Cross - section		
Thickness of glue	40 – 60 µm	51 – 52 µm
General visual inspection	Ok	



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Steuer-Nr. (Fiscal-Code): 4467400058



Rely on it.

Picture 1 - Upper side – Heat storage – Comparison (Original – 120°C / 30 minutes – 150°C / 30 minutes)



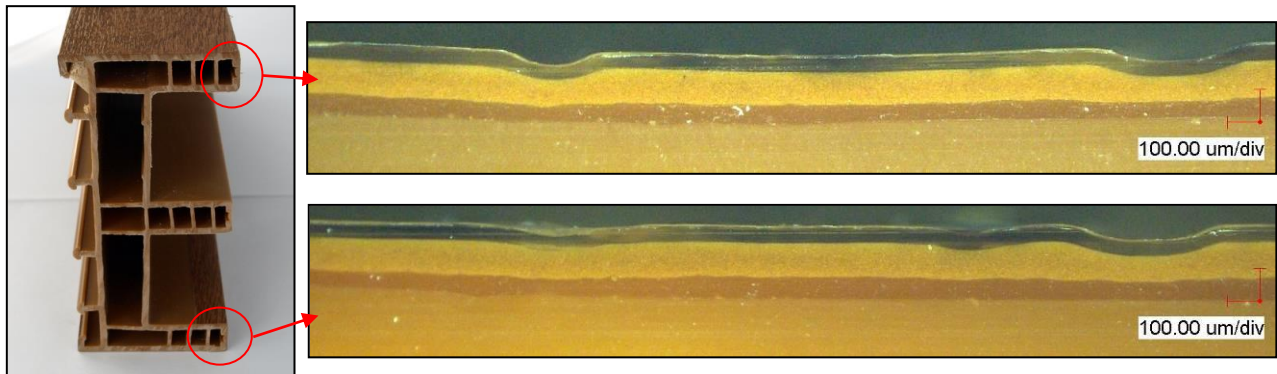
- No air bubbles between glue and profile visible

Picture 2 - Bottom side – Heat storage – Comparison (Original – 120°C / 30 minutes – 150°C / 30 minutes)



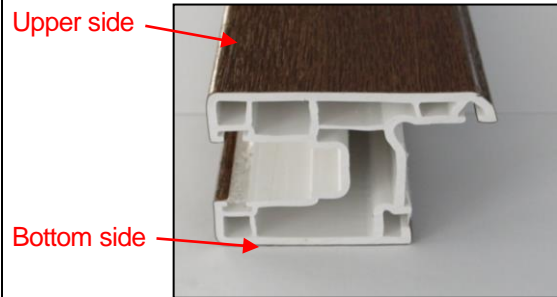
- No air bubbles between glue and profile visible

Picture 3 – Cross section of the edge

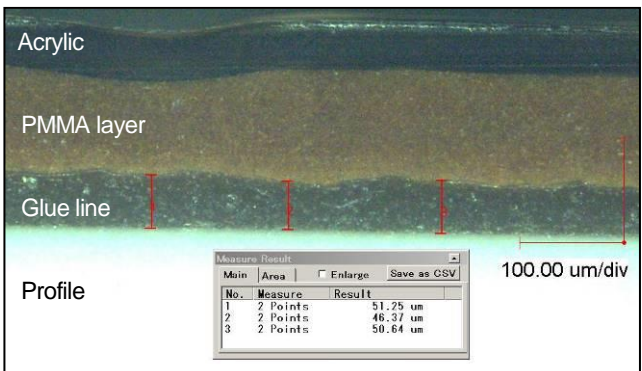


- The glue application is Ok.

Test material 2	
Date of test	22 th of September 2016
Foil type	RENOLIT EXOFOL FX
Decor	Walnut V 9.2178 707 – 116701
FO-ID	105631617
Profile material	PVC
Glue	TAKA 1308.2
Primer bottom side	TAKA 171
Ambient temperature	29 °C
Humidity	73%
Profile temperature	29 °C
Profile temperature after heating	45 °C
Temperature of glue	145 °C
Amount of glue	58 g/m ²
Temperature of the foil	43 °C
Laminating speed	14 m/min

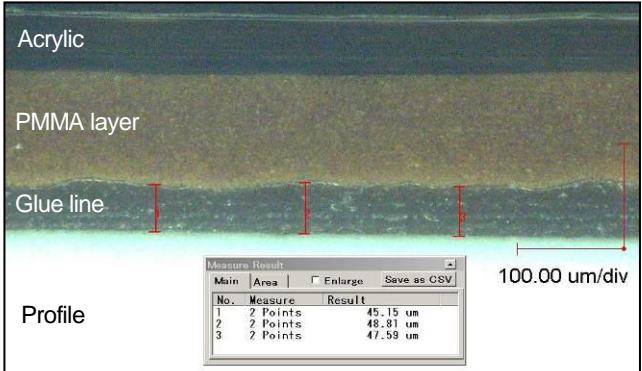


Result - Upper side		
Peel test after X d [N/mm] According RAL - GZ 716	Requirement minimum 3.0	Result 4,3 (Foil break)
Visual inspection ▪ of the glue		OK
Cross - section		
Thickness of glue	40 – 60 µm	46 – 51 µm
General visual inspection	Ok	



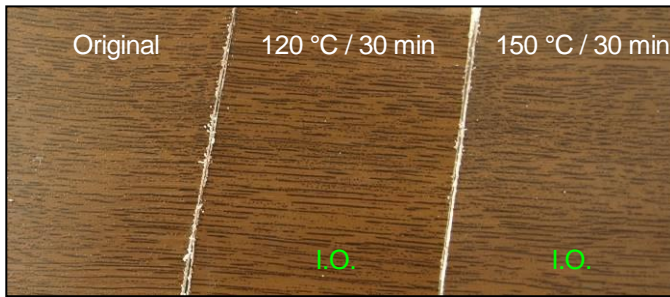
No.	Measure	Result
1	2 Points	51.25 µm
2	2 Points	46.37 µm
3	2 Points	50.64 µm

Result - Bottom side		
Peel test after X d [N/mm] According RAL - GZ 716	Requirement minimum 3.0	Result 4,2 (Foil break)
Visual inspection ▪ of the glue		OK
Cross - section		
Thickness of glue	40 – 60 µm	45 – 49 µm
General visual inspection	Ok	



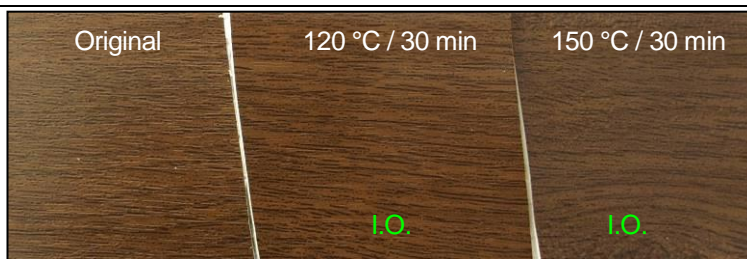
No.	Measure	Result
1	2 Points	45.15 µm
2	2 Points	48.81 µm
3	2 Points	47.59 µm

Picture 1 - Upper side – Heat storage – Comparison (Original – 120°C / 30 minutes – 150°C / 30 minutes)



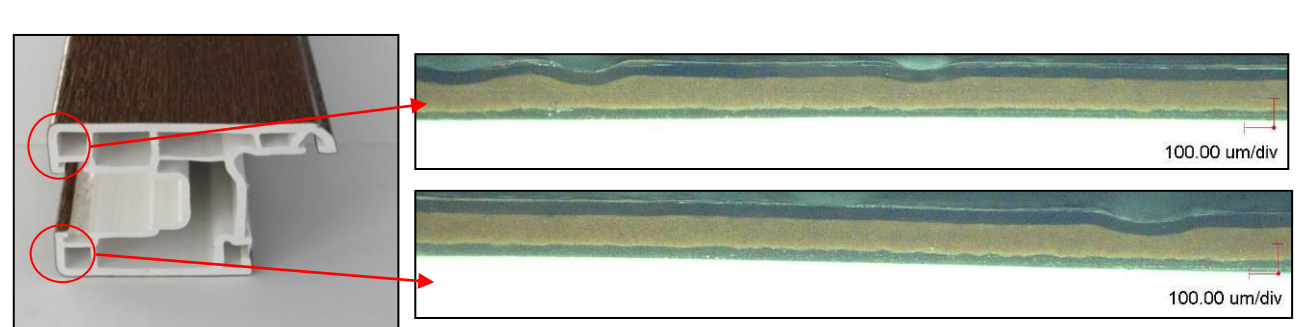
- No air bubbles between glue and profile visible

Picture 2 - Bottom side – Heat storage – Comparison (Original – 120°C / 30 minutes – 150°C / 30 minutes)



- No air bubbles between glue and profile visible

Picture 3 – Cross section of the edge

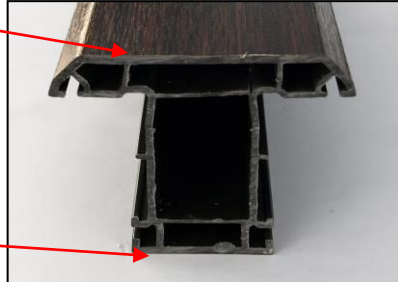


- The glue application is Ok.

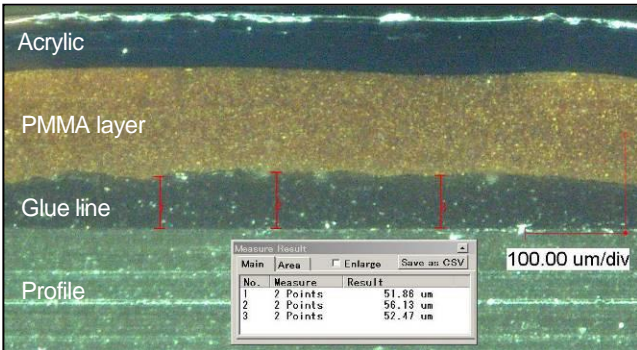
Test material 3	
Date of test	22 th of September 2016
Foil type	RENOLIT EXOFOL FX
Decor	Dark Oak FL-F1 9.2052 789 – 116701
FO-ID	105637714
Profile material	PVC
Glue	TAKA 1308.1
Primer bottom side	TAKA 171
Ambient temperature	28 °C
Humidity	75%
Profile temperature	29 °C
Profile temperature after heating	44 °C
Temperature of glue	145 °C
Amount of glue	58 g/m ²
Temperature of the foil	42 °C
Laminating speed	13 m/min

Upper side →

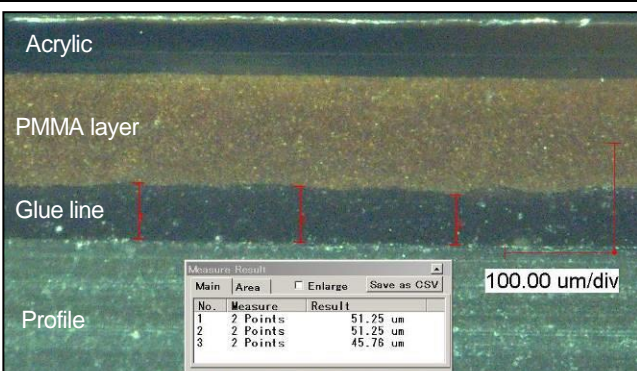
Bottom side →



Result - Upper side		
	Requirement	Result
Peel test after X d [N/mm] According RAL - GZ 716	minimum 3.0	4,3 (Foil break)
Visual inspection of the glue		OK
Cross - section		
Thickness of glue	40 – 60 µm	52 – 56 µm
General visual inspection	Ok	



Result - Bottom side		
	Requirement	Result
Peel test after X d [N/mm] According RAL - GZ 716	minimum 3.0	4,4 (Foil break)
Visual inspection of the glue		OK
Cross - section		
Thickness of glue	40 – 60 µm	46 – 51 µm
General visual inspection	Ok	





Rely on it.

Picture 1 - Upper side – Heat storage – Comparison (Original – 120°C / 30 minutes – 150°C / 30 minutes)



- No air bubbles between glue and profile visible

Picture 2 - Bottom side – Heat storage – Comparison (Original – 120°C / 30 minutes – 150°C / 30 minutes)



- No air bubbles between glue and profile visible

Conclusion

The bonding of the film **RENOLIT EXOXOL FX** on the profiles shows good results in a range between **4.2 and 4.4 N/mm with foil break**. The RAL GZ 716 requirement is 3.0 N/mm

The glue thickness is also ok between **43 and 56 microns**. We recommend an adhesive thickness between 40 and 60 microns.

On the cross-section pictures, you can see the glue application on all profiles is good.

Heat Storage

The profiles shown no failure (e.g. bubbles) after the heat storage test.

Best regards,

i. A. Björn Barthel

Technical Service **RENOLIT EXTERIOR**

Distribution

Herr Prieue; Herr Walter; Herr Braun

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