

# Certificate of shape stability

1. Ref. transp. packaging unit: Wienerberger 950x950 SPK 182x82x63 700pcs  
 2. Ref. measuring report: Wienerberger nv - 20181009002  
 3. Company: Wienerberger nv  
 4. Performed test: Acceleration test according to: Be RD of April 27th 2007, EUMOS 40509,  
 5. Date: 9/10/2018 EN12195-1:2010

6. Description of the tested transport packaging unit

Description:

A wooden 950x950 pallet containing 10 layers of 70 bricks SPK 182x82x63.

Primary packaging: / Secondary packaging: /

Tertiary packaging: Stretch film:  Stretch hood:  Shrink hood:  Straps:

Add transport packaging: /

Anti slip up the pallet:

Anti slip up on layer(s):

Stacking pattern: Interlocked

Pallet type: 950x950 # Layers: 10

Height [mm]: 890 Weight[kg]: 960

Length - LP [mm]: 950

Width - BP [mm]: 950



7. Name and signature responsible of the packaging:

8. Test conditions: Relative humidity: 50% - Temperature: 20°C - Sliding of the pallet is prevented mechanically.

9. Picture in the BP-direction after the test.

Picture in the LP-direction after the test.



10. Conclusions:

The tested load unit is shape stable in the BP-direction at 0.5g under the specified test conditions.

The tested load unit is shape stable in the LP-direction at 0.5g under the specified test conditions.



11. Name and signature responsible of the test: Ing. J. Dendauw



**TEST REPORT of the  
ACCELERATION TEST  
based on RD of April  
27th 2007,  
EN12195:2010,  
EUMOS 40509**

Ref. transp. packaging unit: Wienerberger 950x950 SPK 182x82x63 700pcs

Ref. measuring report: Wienerberger nv - 20181009002

## **Specifications of the test**

### **Client**

Company: Wienerberger nv  
Address: Kapel Ter Bede 121  
8500 Kortrijk  
België  
Contact pers.: Danny Wallaert  
Tel. nr.: +32 (0) 56 24 96 27  
Fax nr.: -  
Mob. nr.: -  
E-mail: Danny.Wallaert@wienerberger.com

### **Test details:**

Test facility: ESTL nv, wafelstraat 45, 8540 Deerlijk, België  
Test responsible: Ing. Jelle Dendauw  
Test equipment: MJ1500 acceleration bench  
Test date: 9/10/2018  
People attending: Jelle Dendauw (ESTL), Danny Wallaert (Wienerberger nv)

Temperature [°C]: 20  
Rel. humidity [%]: 50  
Load conditions: Sliding of the load unit is prevented mechanically.  
Attached documents to the report: /

### **Goal of the acceleration test**

According to the Belgian RD\* of April 27th 2007, EUMOS 40509 and the EN12195:2010, a load securing layout has to be capable of withstanding certain forces of inertia. These forces amount to 0,8g in forward direction, 0,5g in rearward direction and 0,5g in the sideward directions. The acceleration test allows for an unambiguous assessment of a certain load unit, secured in a specified manner, with the rules and regulations of the Belgian RD.

A load unit is placed on a platform and is secured in the correct orientation and according to a specified securing layout. The platform is then accelerated at 0,8g or 0,5g to imitate the influence of the forces of inertia originating from the forward deceleration as prescribed in abovementioned RD. The stability of the load unit is then assessed. If the load unit is deemed stable, it is rotated 90 degrees, together with the securing layout. Next, the platform is accelerated at 0,5g to imitate the influence of the forces of inertia originating from the sideward acceleration prescribed in abovementioned RD. After this test the stability of the load unit is assessed once again.

Reference 20181009/002  
Company: Wienerberger nv

Author Dendauw Jelle Contact: Danny Wallaert  
Pallet name: Wienerberger 950x950 SPK 182x82x63 700pcs

Date: 9/10/2018

## Conclusions

<u>Acceleration:</u> 0,5	<u>Direction:</u> LP	<b>The pallet is shape stable?</b> <input checked="" type="checkbox"/>													
		<table border="1" style="border-collapse: collapse;"> <thead> <tr><th>Before</th><th>After</th><th>Result</th></tr> </thead> <tbody> <tr><td style="text-align: center;">-4,5</td><td style="text-align: center;">-4,5</td><td style="text-align: center;">0</td></tr> </tbody> </table>	Before	After	Result	-4,5	-4,5	0	<table border="1" style="border-collapse: collapse;"> <thead> <tr><th>Before</th><th>After</th><th>Result</th></tr> </thead> <tbody> <tr><td style="text-align: center;">-3</td><td style="text-align: center;">-3</td><td style="text-align: center;">0</td></tr> </tbody> </table>	Before	After	Result	-3	-3	0
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<p>The pallet is behaving shape stable at 0,5g in the LP-direction. Caution: the beams of the pallet start to roll, this should be prevented by changing the dimensions of the wooden beams.</p>															
<u>Acceleration:</u> 0.5	<u>Direction:</u> BP	<b>The pallet is shape stable?</b> <input checked="" type="checkbox"/>													
		<table border="1" style="border-collapse: collapse;"> <thead> <tr><th>Before</th><th>After</th><th>Result</th></tr> </thead> <tbody> <tr><td style="text-align: center;">0,5</td><td style="text-align: center;">4,5</td><td style="text-align: center;">4</td></tr> </tbody> </table>	Before	After	Result	0,5	4,5	4	<table border="1" style="border-collapse: collapse;"> <thead> <tr><th>Before</th><th>After</th><th>Result</th></tr> </thead> <tbody> <tr><td style="text-align: center;">-3</td><td style="text-align: center;">-3</td><td style="text-align: center;">0</td></tr> </tbody> </table>	Before	After	Result	-3	-3	0
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<p>The pallet is behaving shape stable at 0,5g in the BP-direction. In the middle there is a little bit of bulding.</p>															

**Reference** 20181009/002

**Author** Dendauw Jelle

**Contact:** Danny Wallaert

**Date:** 9/10/2018

**Company:** Wienerberger nv

**Pallet name:** Wienerberger 950x950 SPK 182x82x63 700pcs

## General remarks and conclusions

Conclusions:

- The pallet is behaving shape stable at 0,5g in both directions following EUMOS40509.

## Hood specifications

Hood reference: Forum Plast

Thickness [µm]: 150

Hood Type: Shrink hood

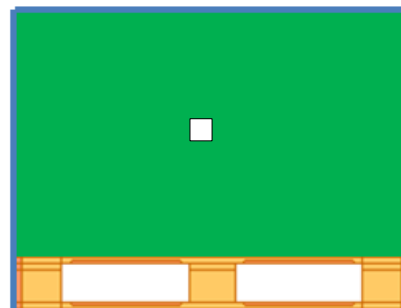
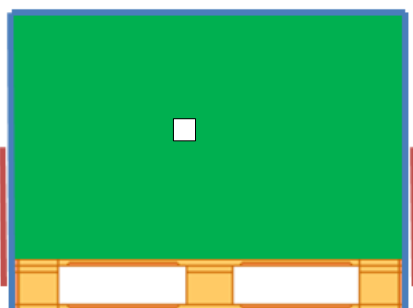
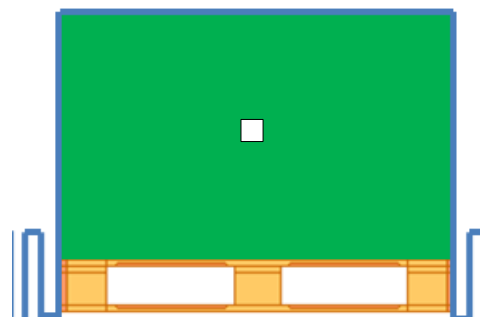
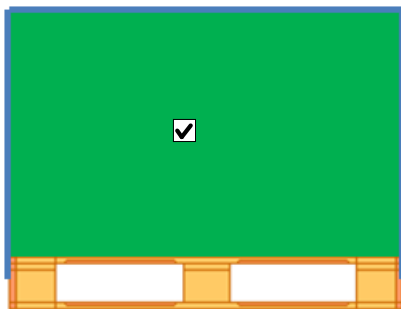
Initial dimensions [mm]x[mm]: 1250x 1220

Vertical stretch [%]:

Hor. stretch long side [%]:

Hor. stretch short side [%]:

Configuration of the hood:



**Reference** 20181009/002  
**Company:** Wienerberger nv

**Author** Dendauw Jelle **Contact:** Danny Wallaert  
**Pallet name:** Wienerberger 950x950 SPK 182x82x63 700pcs

**Date:** 9/10/2018

## Pallet specifications

<u>Name of the pallet:</u> Wienerberger 950x950 SPK 182x82x63 700pcs	
A wooden 950x950 pallet containing 10 layers of 70 bricks SPK 182x82x63.	
<u>Pallet type:</u> 950x950	
<u>Stacking pattern:</u> Interlocked	
<u># Layers:</u> 10 <u>Cases per layer:</u> 70	
<u>Tie sheet between load and pallet:</u> <input type="checkbox"/>	
<u>Tie sheet on top of layer(s):</u>	
<u>LP [mm]:</u> 950 <u>BP[mm]:</u> 950 <u>Weight [kg]:</u> 960 <u>Height [mm]:</u> 890	

<u>Primary packaging</u>	
<u>Name.:</u> /	
<u>Type:</u>	

<u>Secondary packaging</u>	
<u>Name:</u> /	
<u>Theor. head space [mm]:</u> 0	
<u>Gross weight [kg]:</u> 0	
<u>Compression force [N]:</u> 0	
<u>Fluting type:</u>	
<u>Prim units per sec. unit:</u> 0	

<u>Additional packaging</u>
/