

Certificate of shape stability

1. Ref. transp. packaging unit:	Wienerberger 1270x600 WM 178x83x48 660pcs - 2 vertical straps	
2. Ref. measuring report:	Wienerberger nv	- 20190624010
3. Company:	Wienerberger nv	
4. Performed test:	Acceleration test according to: Be RD of April 27th 2007, EUMOS 40509,	
5. Date:	31/01/2019	EN12195-1:2010

6. Description of the tested transport packaging unit

Description:

A wooden 1170x600 containing 10 layers. In total there are 660 bricks WM 178x83x48 on the pallet. 2 vertical straps (16x0,89mm PET) are used in the BP-direction.

Primary packaging: /

Secondary packaging: /

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

Add transport packaging: 2 vertical straps

Anti slip up the pallet:

Anti slip up on layer(s):

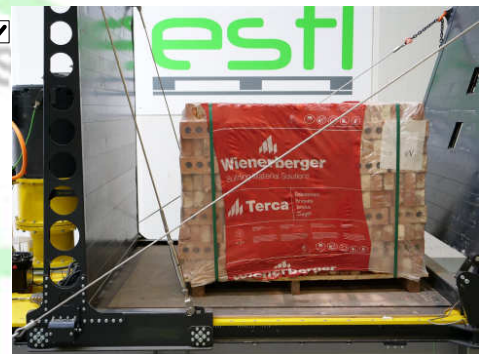
Stacking pattern: Interlocked

Pallet type: 1270x600 # Layers: 10

Height [mm]: 875 Weight[kg]: 790

Length - LP [mm]: 1170

Width - BP [mm]: 600



7. Name and signature responsible of the packaging:

8. Test conditions: Relative humidity: 48% - 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 1270x600 WM 178x83x48 660pcs - 2 vertical straps

Ref. measuring report: Wienerberger nv - 20190624010

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: 31/01/2019
People attending: Jelle Dendauw (ESTL), Danny Wallaert (Wienerberger), Kristof Decroos (Wienerberger)

Temperature [°C]: 20
Rel. humidity [%]: 48
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 20190624/010
Company: Wienerberger nv

Author Dendauw Jelle Contact Danny Wallaert Date: 31/01/2019
Pallet name Wienerberger 1270x600 WM 178x83x48 660pcs - 2 vertical straps

Conclusions

Acceleration: 0,5 Direction: LP **The pallet is shape stable?**

Before	After	Result
0	0	0



Before	After	Result
-3	-3	0


Before	After	Result
-2	-2,5	0,5

Deformation:

The pallet is behaving shape stable at 0,5g in the LP-direction.

Acceleration: 0,5 Direction: BP **The pallet is shape stable?**

Before	After	Result
-1	-1,5	0,5



Before	After	Result
-3	-3,5	0,5

Before	After	Result
-1,5	-2	0,5

Deformation:

The pallet is behaving shape stable at 0,5g in the BP-direction.

Reference 20190624/010

Author Dendauw Jelle

Contact Danny Wallaert

Date: 31/01/2019

Company: Wienerberger nv

Pallet name Wienerberger 1270x600 WM 178x83x48 660pcs - 2 vertical straps

General remarks and conclusions

Conclusions:

- The pallet is behaving shape stable in the LP- and BP-direction at 0,5g following EUMOS 40509.
- Tilting should be avoided on truck level.

Hood specifications

Hood reference: Techno Sales

Thickness [µm]: 120

Hood Type: Shrink hood

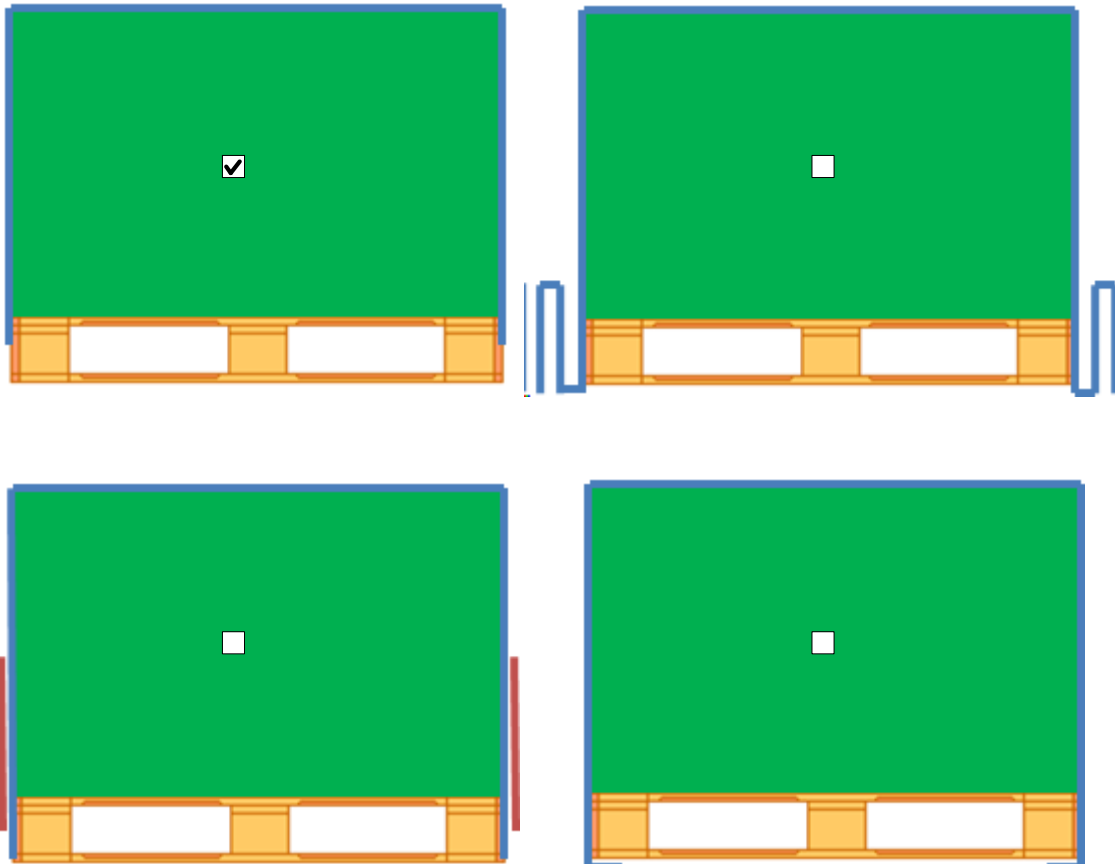
Initial dimensions [mm]x[mm]: x

Vertical stretch [%]:

Hor. stretch long side [%]:

Hor. stretch short side [%]:

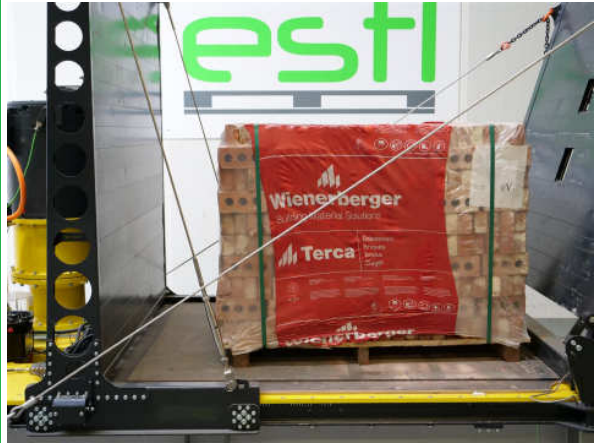
Configuration of the hood:



Reference 20190624/010
Company: Wienerberger nv

Author Dendauw Jelle **Contact** Danny Wallaert **Date:** 31/01/2019
Pallet name Wienerberger 1270x600 WM 178x83x48 660pcs - 2 vertical straps

Pallet specifications

<u>Name of the pallet:</u> Wienerberger 1270x600 WM 178x83x48 660pcs - 2 vertical straps	
A wooden 1170x600 containing 10 layers. In total there are 660 bricks WM 178x83x48 on the pallet. 2 vertical straps (16x0,89mm PET) are used in the BP-direction.	
<u>Pallet type:</u> 1270x600	
<u>Stacking pattern:</u> Interlocked	
<u># Layers:</u> 10 <u>Cases per layer:</u>	
<u>Tie sheet between load and pallet:</u> <input type="checkbox"/>	
<u>Tie sheet on top of layer(s):</u>	
<u>LP [mm]:</u> 1170 <u>BP[mm]:</u> 600 <u>Weight [kg]:</u> 790 <u>Height [mm]:</u> 875	

Primary packaging

Name.: /

Type:



Secondary packaging

Name: /

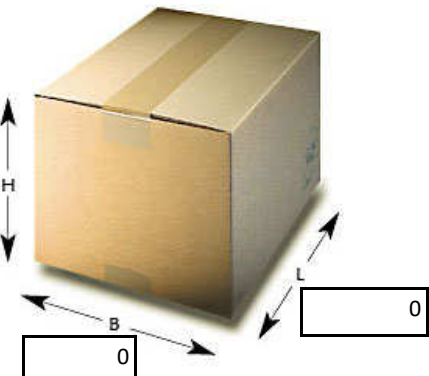
Theor. head space [mm]: 0

Gross weight [kg]: 0

Compression force [N]: 0

Fluting type:

Prim units per sec. unit: 0



Additional packaging

2 vertical straps