# Certificate of shape stability

| | | |
|---|---|---|
| **1.** Ref. transp. packaging unit: | Wienerberger 1080x850 HV2 215x102x65 652pcs | |
| **2.** Ref. measuring report: | Wienerberger nv | - 20181009007 |
| **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 1080x850 pallet containing 11 layers. In total there are 652 bricks LAN 215x102x65 on the pallet.

Primary packaging: /

Secundary 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: 1080x850 # Layers: 11

Height [mm]: 1190 Weight[kg]: 1520

Length - LP [mm]: 1080

Width - BP [mm]: 850


**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.

ESTL nv
Wafelstraat 46
8540 Deerlijk
België

**11.** Name and signature responsable 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 1080x850 HV2 215x102x65 652pcs | | |
| Ref. measuring report: | Wienerberger nv | - | 20181009007 |

ESTL nv - Wafelstraat 46 -8540 Deerlijk - Belgium - T: +32 477/620 614 - F: +32 56/77 86 00
info@estl.be - http://www.estl.be - BE0818.634.666 - RPR Kortrijk

# 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) |

| | |
|---|---|
| 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** 20181009/007 **Author** Dendauw Jelle **Contact:** Danny Wallaert **Date:** 9/10/2018
**Company:** Wienerberger nv **Pallet name:** Wienerberger 1080x850 HV2 215x102x65 652pcs

## Conclusions

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

| Before | After | Result |
|---|---|---|
| -0,5 | -0,5 | **0** |

| Before | After | Result |
|---|---|---|
| -1 | -1 | **0** |

| Before | After | Result |
|---|---|---|
| 0 | 0 | **0** |

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 |
|---|---|---|
| 0 | 0 | **0** |

| Before | After | Result |
|---|---|---|
| 0 | 0 | **0** |

| Before | After | Result |
|---|---|---|
| 0,5 | 0,5 | **0** |

Deformation: ☐ ☐ ☐ ☐ ☐

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

Packaging Type Approval Load Securing Engineering

**Reference** 20181009/007 **Author** Dendauw Jelle **Contact:** Danny Wallaert **Date:** 9/10/2018

**Company:** Wienerberger nv **Pallet name:** Wienerberger 1080x850 HV2 215x102x65 652pcs

## General remarks and conclusions

Conclusions:

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

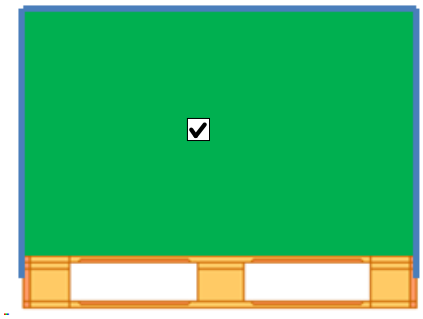
## Hood specifications

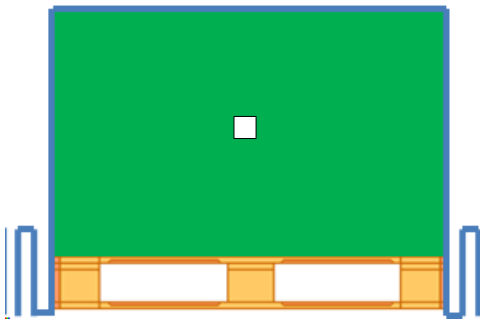
Hood reference: Forum Plast Thickness [µm]: 130

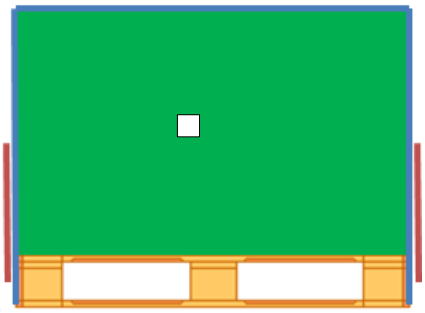
Hood_Type: Shrink hood Initial dimensions [mm]x[mm]: 1260x 1120

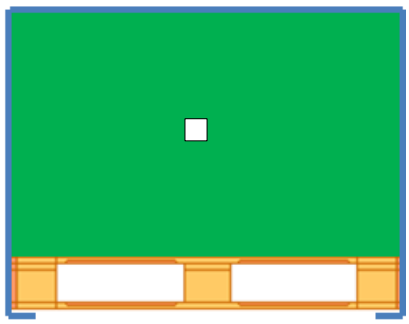
Vertical stretch [%]: Hor. stretch long side [%]: Hor. stetch short side [%]:

Configuration of the hood:









Packaging | Type Approval | Load Securing | Engineering

**Reference** 20181009/007 **Author** Dendauw Jelle **Contact:** Danny Wallaert **Date:** 9/10/2018

**Company:** Wienerberger nv **Pallet name:** Wienerberger 1080x850 HV2 215x102x65 652pcs

## Pallet specifications

Name of the pallet: Wienerberger 1080x850 HV2 215x102x65 652pcs

A wooden 1080x850 pallet containing 11 layers. In total there are 652 bricks LAN 215x102x65 on the pallet.


Pallet type: 1080x850

Stacking pattern: Interlocked

# Layers: 11 Cases per layer:

Tie sheet between load and pallet: ☐

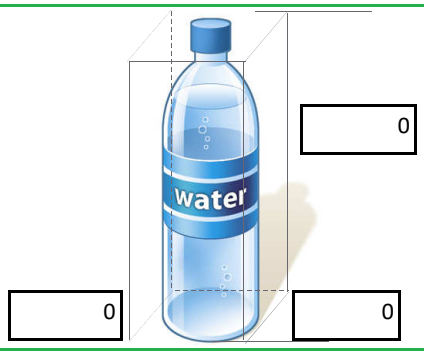
Tie sheet on top of layer(s):

LP [mm]: 1080 BP[mm]: 850 Weight [kg]: 1520 Height [mm]: 1190

*Primary packaging*

Name.: /

Type:




*Secondary packaging*

Name: /

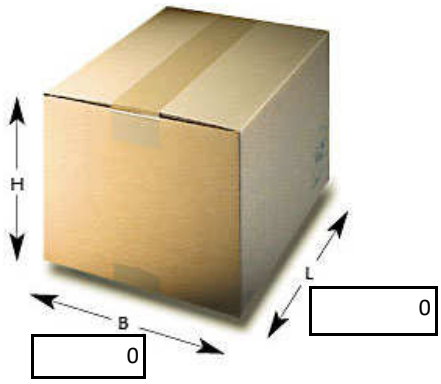
Theor. head space [mm]: 0

Gross weight [kg]: 0

Compression force [N]: 0

Fluting type:

Prim units per sec. unit: 0




*Additional packaging*

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