Certificate of shape stability

1.	Ref. transp. packaging unit:	Wienerberger 1020x820 LAN 215x102x65 612pcs - 2 vert straps - Retro
2.	Ref. measuring report:	Wienerberger nv - 20200901001
3.	Company:	Wienerberger nv
4.	Performed test:	Acceleration test following EUMOS40509:2020
5.	Test date:	1/09/2020
6.	Test institute and responsible:	ESTL nv, Wafelstraat 46, 8540 Deerlijk, Belgium - Dendauw Jelle

7. Description of the tested load unit:

A wooden 1020x820 pallet containing 11 layers. In total there are 612 bricks LAN 215X102X65 Retro on the pallet. There are 2 vertical straps in the LP-direction. The bricks are stacked by hand.

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: 1020x820 # Layers: 11

Height [mm]: 1150 Weight[kg]: 1360

Length - LP [mm]: 1020

Width - BP [mm]: 820

8. Name and signature responsible of the packaging: Danny Wallaert

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

10a. Picture before - durig - after the acceleration test in the BP-direction

10b. Conclusion BP-direction:

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

11a. Picture before - durig - after the acceleration test in the LP-direction

10b. Conclusion BP-direction:

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

12. Name and signature responsable of the test: Ing. J. Dendauw

ESTL nv
Wafelstraat 46
8540 Deerlijk
België

Specifications of the test

Contact information 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 46, 8540 Deerlijk, Belgium
Test responsible:	Dendauw Jelle
Test equipment:	MJ1500 acceleration bench
Test date:	1/09/2020
People attending:	Jelle Dendauw (ESTL), Danny Wallaert (Wienerberger)
Temperature [°C]:	20
Rel. humidity [%]:	65
Load conditions:	Sliding of the load unit is prevented mechanically.

Attached documents to the report: /

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

Packaging Type Approval Load Securing Engineering

Reference 20200901/001 **Author** Dendauw Jelle **Contact:** Danny Wallaert **Date:** 1/09/2020

Company: Wienerberger nv **LU name:** Wienerberger 1020x820 LAN 215x102x65 612pcs - 2 vert straps -

Test specifications

Customer:	Wienerberger nv	Contact:	Danny Wallaert
Test facility:	ESTL nv, Wafelstraat 46, 8540 Deerlijk, Belgium	Date	1/09/2020
Test engineer:	Dendauw Jelle	Temperature [°C]: 20	Rel. humidity [%]: 50
Load unit:	Wienerberger 1020x820 LAN 215x102x65 612pcs - 2 vert straps - Retro		

Conclusions and remarks

Conclusion LP-direction: The load unit behaves shape stable following EUMOS40509 at an acceleration of 0,5g.

Conclusion BP-direction: The load unit behaves shape stable following EUMOS40509 at an acceleration of 0,5g.

Remark:
- 2 straps in the vertical direction
- The shrink hood should be free of any tears at the bottom

Pallet specifications

Name of the pallet: Wienerberger 1020x820 LAN 215x102x65 612pcs - 2 vert straps - Retro

A wooden 1020x820 pallet containing 11 layers. In total there are 612 bricks LAN 215X102X65 Retro on the pallet. There are 2 vertical straps in the LP-direction. The bricks are stacked by hand.

Pallet type: 1020x820

Stacking pattern: Interlocked

Layers: 11 Cases per layer:

Tie sheet between load and pallet: ☐

Tie sheet on top of layer(s):

LP [mm]: 1020 BP[mm]: 820 Weight [kg]: 1360 Height [mm]: 1150

Packaging | Type Approval | Load Securing | Engineering

Reference 20200901/001 **Author** Dendauw Jelle **Contact:** Danny Wallaert **Date:** 1/09/2020

Company: Wienerberger nv **LU name:** Wienerberger 1020x820 LAN 215x102x65 612pcs - 2 vert straps -

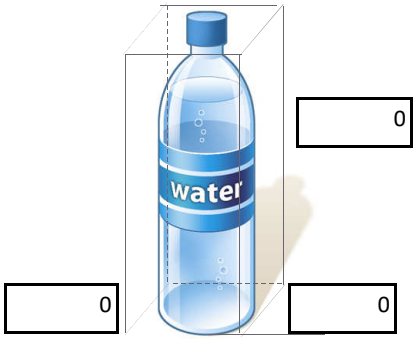
Primary packaging

Name.: /

Type:

Description:

/



Secondary packaging

Name: /

Theor. head space [mm]: 0

Gross weight [kg]: 0

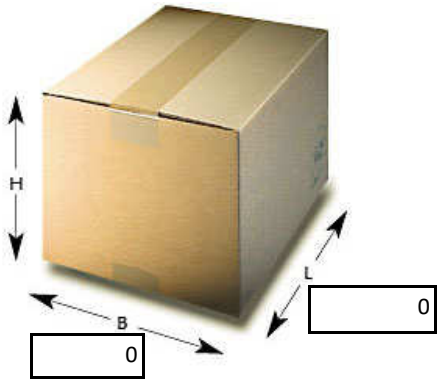
Compression force [N]: 0

Fluting type:

Prim units per sec. unit: 0

Description:

/



Additional packaging

/

Tertiary packaging - stretch hood

Hood reference: SHHS Thickness [µm]: 125

Hood_Type: Shrink hood Initial dimensions [mm]x[mm]: 1200x 1000

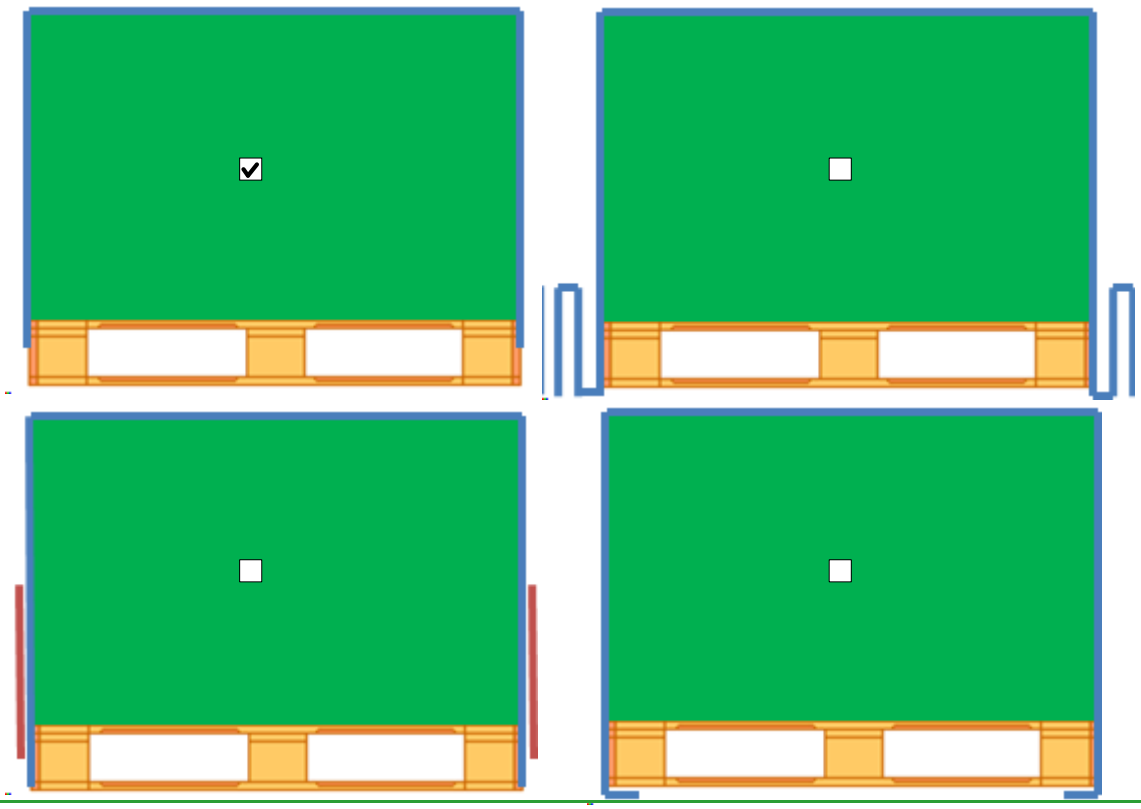
Vertical stretch [%]: Hor. stretch long side [%]: Hor. stetch short side [%]:

Packaging Type Approval Load Securing Engineering

Reference 20200901/001 **Author** Dendauw Jelle **Contact:** Danny Wallaert **Date:** 1/09/2020

Company: Wienerberger nv **LU name:** Wienerberger 1020x820 LAN 215x102x65 612pcs - 2 vert straps -

Configuration of the hood:



Packaging | Type Approval | Load Securing | Engineering

Reference 20200901/001 **Author** Dendauw Jelle **Contact:** Danny Wallaert **Date:** 1/09/2020

Company: Wienerberger nv **LU name:** Wienerberger 1020x820 LAN 215x102x65 612pcs - 2 vert straps -

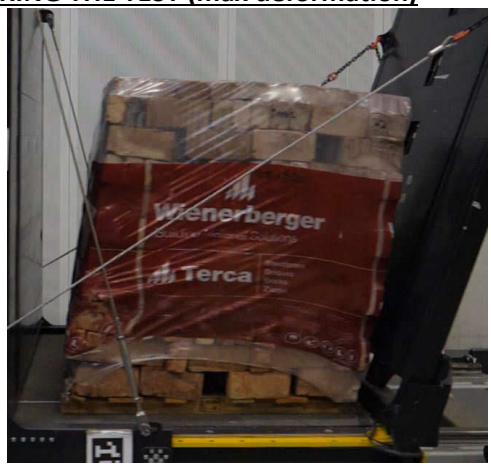
0

Individual tests

Acceleration: 0,5 Direction: LP **EUMOS40509 compliant?** ☑

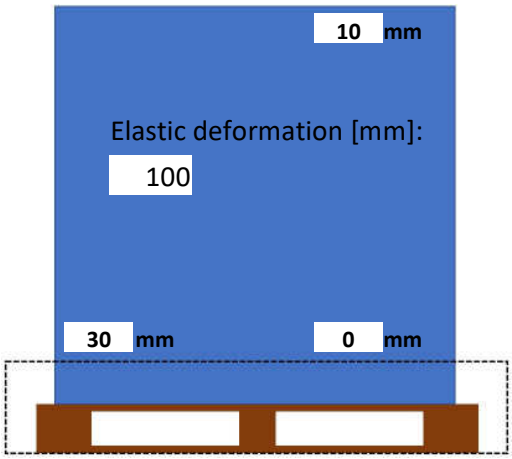
BEFORE THE TEST

DURING THE TEST (max deformation)



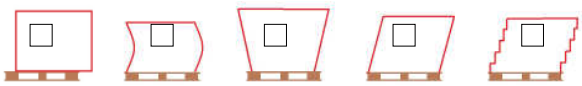
AFTER THE TEST

DEFORMATIONS



Testing history sample:

Ambient conditions
Not used for prior tests.



Comment:

The load unit behaves shape stable at 0,5g in the LP-direction.

Packaging | Type Approval | Load Securing | Engineering

Reference 20200901/001 **Author** Dendauw Jelle **Contact:** Danny Wallaert **Date:** 1/09/2020

Company: Wienerberger nv **LU name:** Wienerberger 1020x820 LAN 215x102x65 612pcs - 2 vert straps -

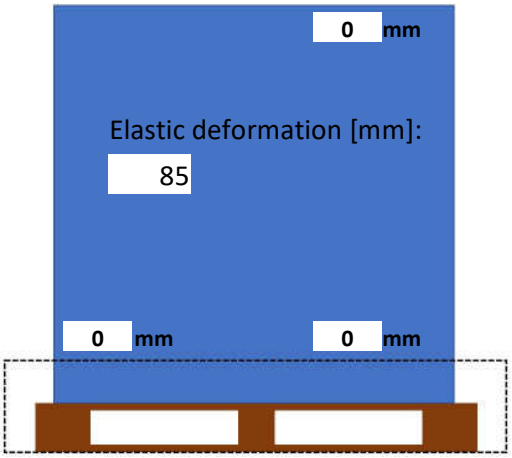
Acceleration: 0,5 Direction: BP **EUMOS40509 compliant?** ☑

BEFORE THE TEST

DURING THE TEST (max deformation)

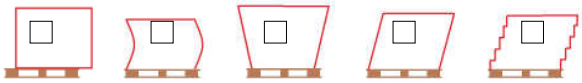
AFTER THE TEST

DEFORMATIONS



Testing history sample:

Ambient conditions



Comment:

The pallet is behaving shape stable at 0,5g in the BP-direction.
Starting point dynamic deflection: +50mm.