



HAY/Nine United Denmark A/S
Havnen 1
DK-8700 Horsens

Order no. 677359-4 rev 2
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Test Report

Material: Model: Palissade table 160×80 – also covers Palissade Table 80×80

Type:	Table				
Length:	1675 mm	Width:	900 mm	Height:	750 mm
Weight	28,5 kg				
Materials:	Steel table with Ø 28 mm legs				

Sampling: The test material was sampled by the client and received at the Danish Technological Institute 15-01-2016.

EN 581-3:2007 Outdoor furniture – Seating and tables for camping, domestic and contract use – Part 3: Mechanical safety requirements and test methods for Tables.

Clauses: 6.3.1, 6.3.2, 6.4. 6.2.1, 6.2.2

EN 15372:2008 Furniture – Strength, durability and safety – Requirements for non-domestic tables.

Test level 3 severe use: Night-club, police stations, transport terminals, hospital public areas, casino, homes for the elderly, sports changing rooms, prisons.

Period: The testing was carried out from 18-01-2016 to 07-03-2016.

Result: Model Palissade Table fulfils the requirements in EN 581-3:2007 and EN 15372:2008, the above clauses.

Individual results appear from Appendices 1 and 2.

Storage: The test material will be destroyed after 1 month, unless otherwise agreed.

Terms: The test was performed according to the New Orderached conditions, which are according to the guidelines laid down by DANAK (The Danish Accreditation). The testing is only valid for the tested specimen. The test report may only be extracted, if the laboratory has approved the extract.

30-05-2016, Danish Technological Institute, Wood Technology, Taastrup
This report replaces report dated 10-03-2016

Test responsible

Verifier

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Test of Model: Palissade Table

EN 15372:2008 Stability, strength and durability tests

Test	Test Method	Cycles	3	Result
Stability under vertical load	EN 1730:2000, 6.7	Test force, N Main surface V ₁ V ₂ Anc. surface V ₁ V ₂	200 400 100 200	Passed
Stability for tables with extension elements	5.3.2	Test force, N	200	N/A
Horizontal static load	EN 1730:2000, 6.2	Test force, N: High (>600) Low (600 or less) 10 times	600 300	Passed
Vertical static load	EN 1730:2000, 6.3	Test force, N: a) Main surface b) Anc. surface 10 times	1250 300	Passed
Horizontal fatigue	EN 1730:2000, 6.4	No. cycles: Test force 300 N	20.000	Passed
Vertical fatigue for cantilever or pedestal tables	EN 1730:2000, 6.5	No. cycles: Test force 300 N	20.000	N/A
Vertical impact for tables without glass in their construction	EN 1730:2000, 6.6	Drop height, mm: 10 times	240	Passed
Vertical impact for tables with glass in their construction	EN 1730:2000, 6.6 EN 14072:2003, 6 ²	Drop height, mm: Safety glass ¹⁾ Other glass	240 300	N/A
Drop test for tables weighing more than 20 kg	Annex A	Nom. drop height mm – tables without glass Nom. drop height mm – tables with glass	100 50	Passed

¹ Glass is considered to be safety glass, if the glass fulfils the requirements in EN 12150-1:2000, Clause 8, fragmentation test; or where the mode of breakage (β) according to EN 12600 is Type B or Type C

² Impact for the table top in accordance with the positions defined within EN 1730:2000, 6.6

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Test of Model: Palissade Table

EN 581-3 Test sequences and test parameters

Test	Reference	Test parameters	Contract	Result
Vertical static load test on the table top	6.3.1	Load: 9×30 s + 1 ×30 min	1.000 N	Passed
Vertical static load test on end extensions	6.3.2	Load: 9×30 s + 1 ×30 min	350 N	N/A
Horizontal fatigue test	6.4	M (kg) F Number of cycles N	Up to 75 150 N 20.000	Passed
Stability under vertical load ^a	6.2.1	F for <i>L</i> smaller than 800 mm F for <i>L</i> between 800 mm and 1.000 mm F for <i>L</i> larger than 1.000 mm F for <i>L</i> larger than 1.600 mm	200 N <i>L</i> -600 400 N 400 N	Passed
Stability of tables which are intended to support a parasol	6.2.2	F	30 N	N/A
a	For tables that might not fulfil the stability requirements before carrying out any tests, the applicable stability tests may be carried out before starting the sequence of tests specified in this Table.			

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Test of Model: Palissade Table

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Danish Accreditation (DANAK):

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DANAK participates in the multilateral agreements for testing and calibration under European co-operation for Accreditation (EA) and under International Laboratory Accreditation Cooperation (ILAC) based on peer evaluation. Accredited test reports and calibration certificates issued by laboratories accredited by DANAK are recognized cross border by members of EA and ILAC equal to test reports and calibration certificates issued by these members' accredited laboratories.

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Construction Product Directive:

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September 2015



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Test Report

Material: Model: Palissade Lounge Sofa – also covers Palissade Lounge Chair High and Palissade Lounge Chair Low

Type:	Chair				
Length:	895 mm	Width:	1355 mm	Height:	705 mm
Weight:	27 kg				
Materials:	Metal tubes Ø 25 mm				

Sampling: The test material was sampled by the client and received at the Danish Technological Institute 18-02-2016.

Method: **EN 581-2:2009** Outdoor furniture – Seating and tables for camping, domestic and contract use – Part 2: mechanical safety requirements and test methods for seating. Clauses: 6.2.1, 6.2.2, 6.7, 6.6, 6.10, 6.12, 6.13, 6.15, 6.4.

EN 1022:2005 Domestic furniture - Seating - Determination of stability.

EN 16139:2013 Furniture - Strength, durability and safety - Requirements for non-domestic seating. Clauses 4.1, 4.2.3, 4.3.3, 5, 6.1.1, 6.1.2, 6.1.3, 6.1.5, 6.1.6, 6.1.8, 6.1.9, 6.1.10, 6.1.12, 6.1.13, 6.1.14, 6.1.15, 6.1.16, 6.1.17.

L2: Extreme use: E.g. in night-clubs, police stations, transport terminals, sport changing rooms, prisons, barracks (non-controlled areas).

Period: The testing was carried out from 23-02-2016 to 05-04-2016.

Result: Model Palissade Lounge Sofa fulfils the requirements in EN 581-2:2009, EN 1022:2005 and EN 16139:2013. Loading according to Test severity L2. Individual results appear from Appendices 1 and 2.

Storage: The test material will be destroyed after 1 month, unless otherwise agreed.

Terms: The test has been performed according to the attached conditions, which are according to the guidelines laid down by DANAK (The Danish Accreditation). The testing is only valid for the tested specimen. The test report may only be extracted, if the laboratory has approved the extract.

Software: This report was generated by software version 2.21 of 2013-06-06.

30-05-2016, Danish Technological Institute, Wood Technology, Taastrup
Replaces report dated 06-04-2016

Test responsible

Co-reader

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Test of model: Palissade Lounge Sofa

EN 581-2 Test sequences and test parameters

Test	Reference	Test parameters	Contract	Result
Seat and back static load test ^a	EN 1728:2000, 6.2.1	Seat force N 10×10 s (±2s) + 1×30 min (±10s) Back force, N 10×10 (±2s) + 1×30 min (±10s)	2.000 560 max	Passed
Seat front edge static load test	EN 1728:2000, 6.2.2	Force N 10×10 s (±2s) + 1×30 min (±10s)	1300	Passed
Seat and back fatigue test for seating ^a	EN 1728:2000, 6.7	Cycles Seat, force, N Back: bending moment, Nm	50.000 1.000 100 max	Passed
Fatigue test on back rest mechanism	See Annex A	Cycles Seat load, kg Force, N Back: bending moment Nm	20.000 100 250 100	N/A
Arm downwards static load test	EN 1728:2000, 6.6	Vertical force, N	900 ^b	Passed
Arm fatigue test	EN 1728:2000, 6.10	Cycles Force, N	30.000 400	Passed
Leg forward static load test	EN 1728:2000, 6.12	Seat load, kg Horizontal force, N	100 400	Passed
Leg sideways static load test	EN 1728:2000, 6.13	Seat load, kg Horizontal force, N	100 300	Passed
Seat impact test ^c	EN 1728:2000, 6.15	Drop height, mm 10 times	180	Passed
Foot rail static test for high seating	EN 1728:2000, 6.4	Vertical force, N	1.200	N/A
Forward stability ^{d e}	EN 1022			Passed
Rearward stability ^d	EN 1022			Passed
Sideways stability ^{d e}	EN 1022			Passed
a	If seat and back are of one piece of flexible material (e.g. textile), only the tests on seat shall be carried out.			
b	If arm rest is less than 15 mm wide, carry out test with 700 N for contract use			
c	The application point shall be at least 100 mm from the front edge. This test shall not be carried out on seating with a seat height > 600 mm			
d	In the case of seating, which might not fulfil the stability requirements before carrying out any tests, the applicable stability tests may be carried out before starting the sequence of tests specified in this table.			
e	This test is not applicable for seating with a seat height <200 mm and a mass <5 kg. The height shall be determined by measuring from the floor to the upper seating area on the geometrical centre of the unloaded seat			

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Test of model: Palissade Lounge Sofa

	Result
6.2 Requirements 6.2.1 General safety requirements The general safety requirements specified in EN 581-1 shall be fulfilled.	Passed
6.2.2. Stability requirements The stability requirements specified in EN 1022 shall be fulfilled.	Passed
6.2.3 Mechanical safety requirements The requirements are fulfilled during and after testing in accordance with Table 1 when: <ul style="list-style-type: none"> a) There are no fractures of any point, member or component b) There is no loosening of joints intended to be rigid c) The seating fulfils its function after removal of the test loads 	Passed
7. Instruction for use 7.1. General Instruction for use shall be provided in the language(s) of the country where the tables are sold. These instructions shall be headed "IMPORTANT, RETAIN FOR FUTURE REFERENCE: READ CAREFULLY" in letters no less than 5 mm high. These instructions shall include at least the following: <ul style="list-style-type: none"> a) Name and address of the producer (manufacturer or supplier) b) Information regarding maintenance c) Conditions for use of the product (camping, domestic or contract) 	N/A

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Test of model: Palissade Lounge Sofa

EN 16139 - Loading according to Test severity L2.

Test	Test Method	Cycles	Load	Result
4.1 General	EN 16139, 4.1			Passed
4.2.2 Shear and squeeze points under influence of powered mechanisms	EN 16139, 4.2.2			N/A
4.2.3 Shear and squeeze points during use	EN 16139, 4.2.3			N/A
4.3.2 Swivelling chairs	EN 1022			N/A
4.3.3 Non swivelling chairs	EN 1022			Passed
4.4 Rolling resistance of the unloaded chair	EN 16139, 4.4			N/A
5 Strength and durability requirements	EN 16139, 5			Passed
6.1.1 Seat static load and back static load test	EN 1728:2012, 6.4	10 10	Seat: 2000 N Back: 700 N	Passed
6.1.2 Seat front edge static load	EN 1728:2012, 6.5	10	Seat: 1600 N	Passed
6.1.3 Vertical load on back rests	EN 1728:2012, 6.6	10	Back: 900 N Seat: 1800 N	Passed
6.1.4 Foot rest static load test	EN 1728:2012, 6.8			N/A
6.1.4 Leg rest static load test	EN 1728:2012, 6.9			N/A
6.1.5 Arm rest sideways static load test	EN 1728:2012, 6.10	10	900 N	Passed
6.1.6 Arm rest downwards static load test	EN 1728:2012, 6.11	5	900 N	Passed
6.1.7 Vertical upwards static load on arm rests	EN 1728:2012, 6.13			N/A
6.1.8 Combined seat and back durability test	EN 1728:2012, 6.17	200000 200000	Seat: 1000 N Back: 300 N	Passed
6.1.9 Seat front edge durability test	EN 1728:2012, 6.18	100000	800 N	Passed
6.1.10 Arm rest durability test	EN 1728:2012, 6.20	60000	400 N	Passed
6.1.11 Foot rest durability test	EN 1728:2012, 6.21			N/A
6.1.12 Leg forward static load test	EN 1728:2012, 6.15	10	Edge: 620 N) (Seat: 1800 N)	Passed
6.1.13 Legs sideways static load test	EN 1728:2012, 6.16	10	Edge: 760 N) (Seat: 1800 N)	Passed
6.1.14 Seat impact test	EN 1728:2012, 6.24	10	300 mm	Passed
6.1.15 Back impact test	EN 1728:2012, 6.25	10	330 mm / 48°	Passed
6.1.16 Arm Impact Test	EN 1728:2012, 6.26	10	330 mm / 48°	Passed
6.1.17 Drop test (multiple seating)	EN 1728:2012, 6.27.1	10		Passed
6.1.18 Auxiliary writing surface static load test	EN 1728:2012, 6.14			N/A
6.1.19 Auxiliary writing surface durability test	EN 1728:2012, 6.22			N/A
7 Information for use	EN 16139, 7			N/A

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Test of model: Palissade Lounge Sofa

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Test of model: Palissade Lounge Sofa



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The use of the accreditation mark on test reports and calibration certificates or reference to accreditation, documents that the service is provided as an accredited service under the company's DANAK accreditation according to EN ISO IEC 17025.

Construction Product Directive:

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Test Report

Material: Model: Palissade Dining Bench

Type:	Chair				
Length:	650 mm	Width:	590 mm	Height:	900 mm
Weight:	9,7 kg				
Materials:	Metal chair Ø 25,4 mm tubes				

Sampling: The test material was sampled by the client and received at the Danish Technological Institute 18-02-2016.

Method: **EN 581-2:2009** Outdoor furniture – Seating and tables for camping, domestic and contract use – Part 2: mechanical safety requirements and test methods for seating. Clauses: 6.1.2, 6.2, 6.2.1, 6.2.2, 6.2.3, 7, 7.1

EN 1022:2005 Domestic furniture - Seating - Determination of stability.

EN 16139:2013 Furniture - Strength, durability and safety - Requirements for non-domestic seating. Clauses 4.1, 4.2.3, 4.3.3, 5, 6.1.1, 6.1.2, 6.1.3, 6.1.5, 6.1.6, 6.1.8, 6.1.9, 6.1.10, 6.1.12, 6.1.13, 6.1.14, 6.1.15, 6.1.16.

L2: Extreme use: E.g. in night-clubs, police stations, transport terminals, sport changing rooms, prisons, barracks (non-controlled areas).

Period: The testing was carried out from 23-02-2016 to 29-03-2016.

Result: Model Palissade Dining Bench fulfils the requirements in EN 581-2:2009, EN 1022:2005 and EN 16139:2013. Loading according to Test severity L2. Individual results appear from Appendices 1 and 2.

Storage: The test material will be destroyed after 1 month, unless otherwise agreed.

Terms: The test has been performed according to the attached conditions, which are according to the guidelines laid down by DANAK (The Danish Accreditation). The testing is only valid for the tested specimen. The test report may only be extracted, if the laboratory has approved the extract.

Software: This report was generated by software version 2.21 of 2013-06-06.

30-05-2016, Danish Technological Institute, Wood Technology, Taastrup
Replaces report dated 05-04-2016

Test responsible

Co-reader

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Test of model: Palissade Dining Bench

EN 581-2 Test sequences and test parameters

Test	Reference	Test parameters	Contract	Result
Seat and back static load test ^a	EN 1728:2000, 6.2.1	Seat force N 10×10 s (±2s) + 1×30 min (±10s) Back force, N 10×10 (±2s) + 1×30 min (±10s)	2.000 560 max	Passed
Seat front edge static load test	EN 1728:2000, 6.2.2	Force N 10×10 s (±2s) + 1×30 min (±10s)	1300	Passed
Seat and back fatigue test for seating ^a	EN 1728:2000, 6.7	Cycles Seat, force, N Back: bending moment, Nm	50.000 1.000 100 max	Passed
Fatigue test on back rest mechanism	See Annex A	Cycles Seat load, kg Force, N Back: bending moment Nm	20.000 100 250 100	N/A
Arm downwards static load test	EN 1728:2000, 6.6	Vertical force, N	900 ^b	Passed
Arm fatigue test	EN 1728:2000, 6.10	Cycles Force, N	30.000 400	Passed
Leg forward static load test	EN 1728:2000, 6.12	Seat load, kg Horizontal force, N	100 400	Passed
Leg sideways static load test	EN 1728:2000, 6.13	Seat load, kg Horizontal force, N	100 300	Passed
Seat impact test ^c	EN 1728:2000, 6.15	Drop height, mm 10 times	180	Passed
Foot rail static test for high seating	EN 1728:2000, 6.4	Vertical force, N	1.200	N/A
Forward stability ^{d e}	EN 1022			Passed
Rearward stability ^d	EN 1022			Passed
Sideways stability ^{d e}	EN 1022			Passed
a	If seat and back are of one piece of flexible material (e.g. textile), only the tests on seat shall be carried out.			
b	If arm rest is less than 15 mm wide, carry out test with 700 N for contract use			
c	The application point shall be at least 100 mm from the front edge. This test shall not be carried out on seating with a seat height > 600 mm			
d	In the case of seating, which might not fulfil the stability requirements before carrying out any tests, the applicable stability tests may be carried out before starting the sequence of tests specified in this table.			
e	This test is not applicable for seating with a seat height <200 mm and a mass <5 kg. The height shall be determined by measuring from the floor to the upper seating area on the geometrical centre of the unloaded seat			

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Test of model: Palissade Dining Bench

	Result
<p>6.2 Requirements</p> <p>6.2.1 General safety requirements The general safety requirements specified in EN 581-1 shall be fulfilled.</p>	Passed
<p>6.2.2. Stability requirements The stability requirements specified in EN 1022 shall be fulfilled.</p>	Passed
<p>6.2.3 Mechanical safety requirements The requirements are fulfilled during and after testing in accordance with Table 1 when:</p> <ul style="list-style-type: none"> a) There are no fractures of any point, member or component b) There is no loosening of joints intended to be rigid c) The seating fulfils its function after removal of the test loads 	Passed
<p>7. Instruction for use</p> <p>7.1. General Instruction for use shall be provided in the language(s) of the country where the tables are sold. These instructions shall be headed "IMPORTANT, RETAIN FOR FUTURE REFERENCE: READ CAREFULLY" in letters no less than 5 mm high.</p> <p>These instructions shall include at least the following:</p> <ul style="list-style-type: none"> a) Name and address of the producer (manufacturer or supplier) b) Information regarding maintenance c) Conditions for use of the product (camping, domestic or contract) 	N/A

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Test of model: Palissade Dining Bench

EN 16139 - Loading according to Test severity L2.

Test	Test Method	Cycles	Load	Result
4.1 General	EN 16139, 4.1			Passed
4.2.2 Shear and squeeze points under influence of powered mechanisms	EN 16139, 4.2.2			N/A
4.2.3 Shear and squeeze points during use	EN 16139, 4.2.3			N/A
4.3.2 Swivelling chairs	EN 1022			N/A
4.3.3 Non swivelling chairs	EN 1022			Passed
4.4 Rolling resistance of the unloaded chair	EN 16139, 4.4			N/A
5 Strength and durability requirements	EN 16139, 5			Passed
6.1.1 Seat static load and back static load test	EN 1728:2012, 6.4	10 10	Seat: 2000 N Back: 700 N	Passed
6.1.2 Seat front edge static load	EN 1728:2012, 6.5	10	Seat: 1600 N	Passed
6.1.3 Vertical load on back rests	EN 1728:2012, 6.6	10	Back: 900 N Seat: 1800 N	Passed
6.1.4 Foot rest static load test	EN 1728:2012, 6.8			N/A
6.1.4 Leg rest static load test	EN 1728:2012, 6.9			N/A
6.1.5 Arm rest sideways static load test	EN 1728:2012, 6.10	10	900 N	Passed
6.1.6 Arm rest downwards static load test	EN 1728:2012, 6.11	5	900 N	Passed
6.1.7 Vertical upwards static load on arm rests	EN 1728:2012, 6.13			N/A
6.1.8 Combined seat and back durability test	EN 1728:2012, 6.17	200000 200000	Seat: 1000 N Back: 300 N	Passed
6.1.9 Seat front edge durability test	EN 1728:2012, 6.18	100000	800 N	Passed
6.1.10 Arm rest durability test	EN 1728:2012, 6.20	60000	400 N	Passed
6.1.11 Foot rest durability test	EN 1728:2012, 6.21			N/A
6.1.12 Leg forward static load test	EN 1728:2012, 6.15	10	Edge: 620 N) (Seat: 1800 N)	Passed
6.1.13 Legs sideways static load test	EN 1728:2012, 6.16	10	Edge: 760 N) (Seat: 1800 N)	Passed
6.1.14 Seat impact test	EN 1728:2012, 6.24	10	300 mm	Passed
6.1.15 Back impact test	EN 1728:2012, 6.25	10	330 mm / 48°	Passed
6.1.16 Arm Impact Test	EN 1728:2012, 6.26	10	330 mm / 48°	Passed
6.1.17 Drop test (multiple seating)	EN 1728:2012, 6.27.1			N/A
6.1.18 Auxiliary writing surface static load test	EN 1728:2012, 6.14			N/A
6.1.19 Auxiliary writing surface durability test	EN 1728:2012, 6.22			N/A
7 Information for use	EN 16139, 7			N/A

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Photo



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http://ec.europa.eu/growth/single-market/european-standards/harmonised-standards/construction-products/index_en.htm

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Test Report

Material: Model: Palissade Dining Arm Chair

Type:	Chair				
Length:	650 mm	Width:	590 mm	Height:	900 mm
Weight:	9,7 kg				
Materials:	Metal chair Ø 25,4 mm tubes				

Sampling: The test material was sampled by the client and received at the Danish Technological Institute 15-01-2016.

Method: **EN 581-2:2009** Outdoor furniture – Seating and tables for camping, domestic and contract use – Part 2: mechanical safety requirements and test methods for seating. Clauses: 6.1.2, 6.2, 6.2.1, 6.2.2, 6.2.3, 7, 7.1

EN 1022:2005 Domestic furniture - Seating - Determination of stability.

EN 16139:2013 Furniture - Strength, durability and safety - Requirements for non-domestic seating. Clauses 4.1, 4.2.3, 4.3.3, 5, 6.1.1, 6.1.2, 6.1.3, 6.1.5, 6.1.6, 6.1.8, 6.1.9, 6.1.10, 6.1.12, 6.1.13, 6.1.14, 6.1.15, 6.1.16.

L2: Extreme use: E.g. in night-clubs, police stations, transport terminals, sport changing rooms, prisons, barracks (non-controlled areas).

Period: The testing was carried out from 18-01-2016 to 16-02-2016.

Result: Model Palissade Dining Arm Chair fulfils the requirements in EN 581-2:2009, EN 1022:2005 and EN 16139:2013. Loading according to Test severity L2. Individual results appear from Appendix 1.

Storage: The test material will be destroyed after 1 month, unless otherwise agreed.

Terms: The test has been performed according to the attached conditions, which are according to the guidelines laid down by DANAK (The Danish Accreditation). The testing is only valid for the tested specimen. The test report may only be extracted, if the laboratory has approved the extract.

Software: This report was generated by software version 2.21 of 2013-06-06.

30-05-2016, Danish Technological Institute, Wood Technology, Taastrup
Replaces report dated 16-02-2016

Test responsible

Co-reader

Order no. 677359-5 rev 1

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Initials laha/prni/hbs

Test of model: Palissade Dining Arm Chair

EN 581-2 Test sequences and test parameters

Test	Reference	Test parameters	Contract	Result
Seat and back static load test ^a	EN 1728:2000, 6.2.1	Seat force N 10×10 s (±2s) + 1×30 min (±10s) Back force, N 10×10 (±2s) + 1×30 min (±10s)	2.000 560 max	Passed
Seat front edge static load test	EN 1728:2000, 6.2.2	Force N 10×10 s (±2s) + 1×30 min (±10s)	1300	Passed
Seat and back fatigue test for seating ^a	EN 1728:2000, 6.7	Cycles Seat, force, N Back: bending moment, Nm	50.000 1.000 100 max	Passed
Fatigue test on back rest mechanism	See Annex A	Cycles Seat load, kg Force, N Back: bending moment Nm	20.000 100 250 100	N/A
Arm downwards static load test	EN 1728:2000, 6.6	Vertical force, N	900 ^b	Passed
Arm fatigue test	EN 1728:2000, 6.10	Cycles Force, N	30.000 400	Passed
Leg forward static load test	EN 1728:2000, 6.12	Seat load, kg Horizontal force, N	100 400	Passed
Leg sideways static load test	EN 1728:2000, 6.13	Seat load, kg Horizontal force, N	100 300	Passed
Seat impact test ^c	EN 1728:2000, 6.15	Drop height, mm 10 times	180	Passed
Foot rail static test for high seating	EN 1728:2000, 6.4	Vertical force, N	1.200	N/A
Forward stability ^{d e}	EN 1022			Passed
Rearward stability ^d	EN 1022			Passed
Sideways stability ^{d e}	EN 1022			Passed
a	If seat and back are of one piece of flexible material (e.g. textile), only the tests on seat shall be carried out.			
b	If arm rest is less than 15 mm wide, carry out test with 700 N for contract use			
c	The application point shall be at least 100 mm from the front edge. This test shall not be carried out on seating with a seat height > 600 mm			
d	In the case of seating, which might not fulfil the stability requirements before carrying out any tests, the applicable stability tests may be carried out before starting the sequence of tests specified in this table.			
e	This test is not applicable for seating with a seat height <200 mm and a mass <5 kg. The height shall be determined by measuring from the floor to the upper seating area on the geometrical centre of the unloaded seat			

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Test of model: Palissade Dining Arm Chair

	Result
6.2 Requirements 6.2.1 General safety requirements The general safety requirements specified in EN 581-1 shall be fulfilled.	Passed
6.2.2. Stability requirements The stability requirements specified in EN 1022 shall be fulfilled.	Passed
6.2.3 Mechanical safety requirements The requirements are fulfilled during and after testing in accordance with Table 1 when: <ul style="list-style-type: none"> a) There are no fractures of any point, member or component b) There is no loosening of joints intended to be rigid c) The seating fulfils its function after removal of the test loads 	Passed
7. Instruction for use 7.1. General Instruction for use shall be provided in the language(s) of the country where the tables are sold. These instructions shall be headed "IMPORTANT, RETAIN FOR FUTURE REFERENCE: READ CAREFULLY" in letters no less than 5 mm high. These instructions shall include at least the following: <ul style="list-style-type: none"> a) Name and address of the producer (manufacturer or supplier) b) Information regarding maintenance c) Conditions for use of the product (camping, domestic or contract) 	N/A

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Test of model: Palissade Dining Arm Chair

EN 16139 - Loading according to Test severity L2.

Test	Test Method	Cycles	Load	Result
4.1 General	EN 16139, 4.1			Passed
4.2.2 Shear and squeeze points under influence of powered mechanisms	EN 16139, 4.2.2			N/A
4.2.3 Shear and squeeze points during use	EN 16139, 4.2.3			N/A
4.3.2 Swivelling chairs	EN 1022			N/A
4.3.3 Non swivelling chairs	EN 1022			Passed
4.4 Rolling resistance of the unloaded chair	EN 16139, 4.4			N/A
5 Strength and durability requirements	EN 16139, 5			Passed
6.1.1 Seat static load and back static load test	EN 1728:2012, 6.4	10 10	Seat: 2000 N Back: 700 N	Passed
6.1.2 Seat front edge static load	EN 1728:2012, 6.5	10	Seat: 1600 N	Passed
6.1.3 Vertical load on back rests	EN 1728:2012, 6.6	10	Back: 900 N Seat: 1800 N	Passed
6.1.4 Foot rest static load test	EN 1728:2012, 6.8			N/A
6.1.4 Leg rest static load test	EN 1728:2012, 6.9			N/A
6.1.5 Arm rest sideways static load test	EN 1728:2012, 6.10	10	900 N	Passed
6.1.6 Arm rest downwards static load test	EN 1728:2012, 6.11	5	900 N	Passed
6.1.7 Vertical upwards static load on arm rests	EN 1728:2012, 6.13			N/A
6.1.8 Combined seat and back durability test	EN 1728:2012, 6.17	200000 200000	Seat: 1000 N Back: 300 N	Passed
6.1.9 Seat front edge durability test	EN 1728:2012, 6.18	100000	800 N	Passed
6.1.10 Arm rest durability test	EN 1728:2012, 6.20	60000	400 N	Passed
6.1.11 Foot rest durability test	EN 1728:2012, 6.21			N/A
6.1.12 Leg forward static load test	EN 1728:2012, 6.15	10	Edge: 620 N) (Seat: 1800 N)	Passed
6.1.13 Legs sideways static load test	EN 1728:2012, 6.16	10	Edge: 760 N) (Seat: 1800 N)	Passed
6.1.14 Seat impact test	EN 1728:2012, 6.24	10	300 mm	Passed
6.1.15 Back impact test	EN 1728:2012, 6.25	10	330 mm / 48°	Passed
6.1.16 Arm Impact Test	EN 1728:2012, 6.26	10	330 mm / 48°	Passed
6.1.17 Drop test (multiple seating)	EN 1728:2012, 6.27.1			N/A
6.1.18 Auxiliary writing surface static load test	EN 1728:2012, 6.14			N/A
6.1.19 Auxiliary writing surface durability test	EN 1728:2012, 6.22			N/A
7 Information for use	EN 16139, 7			N/A

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Test of model: Palissade Dining Arm Chair

Photo



The general conditions pertaining to assignments accepted by Danish Technological Institute shall apply in full to the technical testing or calibration at Danish Technological Institute and to the completion of test reports or calibration certificates within the relevant field.

Danish Accreditation (DANAK):

DANAK is the national accreditation body in Denmark in compliance with EU regulation No. 765/2008.

DANAK participates in the multilateral agreements for testing and calibration under European co-operation for Accreditation (EA) and under International Laboratory Accreditation Cooperation (ILAC) based on peer evaluation. Accredited test reports and calibration certificates issued by laboratories accredited by DANAK are recognized cross border by members of EA and ILAC equal to test reports and calibration certificates issued by these members' accredited laboratories.

The use of the accreditation mark on test reports and calibration certificates or reference to accreditation, documents that the service is provided as an accredited service under the company's DANAK accreditation according to EN ISO IEC 17025.

Construction Product Directive:

The Danish Technological Institute guarantees that employees carrying out tests to be used together with harmonized standards under notification no. 1235 according to EU regulation 305/2011, article 43, satisfy all the requirements made for capability, integrity and impartiality. You find the CPR here:

http://ec.europa.eu/growth/single-market/european-standards/harmonised-standards/construction-products/index_en.htm

September 2015



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Test Report

Material: Model: Palissade Dining Arm Chair

Type:	Chair				
Length:	650 mm	Width:	590 mm	Height:	900 mm
Weight:	9,7 kg				
Materials:	Metal chair Ø 25,4 mm tubes				

Sampling: The test material was sampled by the client and received at the Danish Technological Institute 15-01-2016.

Method: **EN 581-2:2009** Outdoor furniture – Seating and tables for camping, domestic and contract use – Part 2: mechanical safety requirements and test methods for seating. Clauses: 6.1.2, 6.2, 6.2.1, 6.2.2, 6.2.3, 7, 7.1

EN 1022:2005 Domestic furniture - Seating - Determination of stability.

EN 16139:2013 Furniture - Strength, durability and safety - Requirements for non-domestic seating. Clauses 4.1, 4.2.3, 4.3.3, 5, 6.1.1, 6.1.2, 6.1.3, 6.1.5, 6.1.6, 6.1.8, 6.1.9, 6.1.10, 6.1.12, 6.1.13, 6.1.14, 6.1.15, 6.1.16.

L2: Extreme use: E.g. in night-clubs, police stations, transport terminals, sport changing rooms, prisons, barracks (non-controlled areas).

Period: The testing was carried out from 18-01-2016 to 16-02-2016.

Result: Model Palissade Dining Arm Chair fulfils the requirements in EN 581-2:2009, EN 1022:2005 and EN 16139:2013. Loading according to Test severity L2. Individual results appear from Appendix 1.

Storage: The test material will be destroyed after 1 month, unless otherwise agreed.

Terms: The test has been performed according to the attached conditions, which are according to the guidelines laid down by DANAK (The Danish Accreditation). The testing is only valid for the tested specimen. The test report may only be extracted, if the laboratory has approved the extract.

Software: This report was generated by software version 2.21 of 2013-06-06.

30-05-2016, Danish Technological Institute, Wood Technology, Taastrup
Replaces report dated 16-02-2016

Test responsible

Co-reader

Order no. 677359-5 rev 1

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Test of model: Palissade Dining Arm Chair

EN 581-2 Test sequences and test parameters

Test	Reference	Test parameters	Contract	Result
Seat and back static load test ^a	EN 1728:2000, 6.2.1	Seat force N 10×10 s (±2s) + 1×30 min (±10s) Back force, N 10×10 (±2s) + 1×30 min (±10s)	2.000 560 max	Passed
Seat front edge static load test	EN 1728:2000, 6.2.2	Force N 10×10 s (±2s) + 1×30 min (±10s)	1300	Passed
Seat and back fatigue test for seating ^a	EN 1728:2000, 6.7	Cycles Seat, force, N Back: bending moment, Nm	50.000 1.000 100 max	Passed
Fatigue test on back rest mechanism	See Annex A	Cycles Seat load, kg Force, N Back: bending moment Nm	20.000 100 250 100	N/A
Arm downwards static load test	EN 1728:2000, 6.6	Vertical force, N	900 ^b	Passed
Arm fatigue test	EN 1728:2000, 6.10	Cycles Force, N	30.000 400	Passed
Leg forward static load test	EN 1728:2000, 6.12	Seat load, kg Horizontal force, N	100 400	Passed
Leg sideways static load test	EN 1728:2000, 6.13	Seat load, kg Horizontal force, N	100 300	Passed
Seat impact test ^c	EN 1728:2000, 6.15	Drop height, mm 10 times	180	Passed
Foot rail static test for high seating	EN 1728:2000, 6.4	Vertical force, N	1.200	N/A
Forward stability ^{d e}	EN 1022			Passed
Rearward stability ^d	EN 1022			Passed
Sideways stability ^{d e}	EN 1022			Passed
a	If seat and back are of one piece of flexible material (e.g. textile), only the tests on seat shall be carried out.			
b	If arm rest is less than 15 mm wide, carry out test with 700 N for contract use			
c	The application point shall be at least 100 mm from the front edge. This test shall not be carried out on seating with a seat height > 600 mm			
d	In the case of seating, which might not fulfil the stability requirements before carrying out any tests, the applicable stability tests may be carried out before starting the sequence of tests specified in this table.			
e	This test is not applicable for seating with a seat height <200 mm and a mass <5 kg. The height shall be determined by measuring from the floor to the upper seating area on the geometrical centre of the unloaded seat			

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Test of model: Palissade Dining Arm Chair

	Result
<p>6.2 Requirements</p> <p>6.2.1 General safety requirements The general safety requirements specified in EN 581-1 shall be fulfilled.</p>	Passed
<p>6.2.2. Stability requirements The stability requirements specified in EN 1022 shall be fulfilled.</p>	Passed
<p>6.2.3 Mechanical safety requirements The requirements are fulfilled during and after testing in accordance with Table 1 when:</p> <ul style="list-style-type: none"> a) There are no fractures of any point, member or component b) There is no loosening of joints intended to be rigid c) The seating fulfils its function after removal of the test loads 	Passed
<p>7. Instruction for use</p> <p>7.1. General Instruction for use shall be provided in the language(s) of the country where the tables are sold. These instructions shall be headed "IMPORTANT, RETAIN FOR FUTURE REFERENCE: READ CAREFULLY" in letters no less than 5 mm high.</p> <p>These instructions shall include at least the following:</p> <ul style="list-style-type: none"> a) Name and address of the producer (manufacturer or supplier) b) Information regarding maintenance c) Conditions for use of the product (camping, domestic or contract) 	N/A

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Test of model: Palissade Dining Arm Chair

EN 16139 - Loading according to Test severity L2.

Test	Test Method	Cycles	Load	Result
4.1 General	EN 16139, 4.1			Passed
4.2.2 Shear and squeeze points under influence of powered mechanisms	EN 16139, 4.2.2			N/A
4.2.3 Shear and squeeze points during use	EN 16139, 4.2.3			N/A
4.3.2 Swivelling chairs	EN 1022			N/A
4.3.3 Non swivelling chairs	EN 1022			Passed
4.4 Rolling resistance of the unloaded chair	EN 16139, 4.4			N/A
5 Strength and durability requirements	EN 16139, 5			Passed
6.1.1 Seat static load and back static load test	EN 1728:2012, 6.4	10 10	Seat: 2000 N Back: 700 N	Passed
6.1.2 Seat front edge static load	EN 1728:2012, 6.5	10	Seat: 1600 N	Passed
6.1.3 Vertical load on back rests	EN 1728:2012, 6.6	10	Back: 900 N Seat: 1800 N	Passed
6.1.4 Foot rest static load test	EN 1728:2012, 6.8			N/A
6.1.4 Leg rest static load test	EN 1728:2012, 6.9			N/A
6.1.5 Arm rest sideways static load test	EN 1728:2012, 6.10	10	900 N	Passed
6.1.6 Arm rest downwards static load test	EN 1728:2012, 6.11	5	900 N	Passed
6.1.7 Vertical upwards static load on arm rests	EN 1728:2012, 6.13			N/A
6.1.8 Combined seat and back durability test	EN 1728:2012, 6.17	200000 200000	Seat: 1000 N Back: 300 N	Passed
6.1.9 Seat front edge durability test	EN 1728:2012, 6.18	100000	800 N	Passed
6.1.10 Arm rest durability test	EN 1728:2012, 6.20	60000	400 N	Passed
6.1.11 Foot rest durability test	EN 1728:2012, 6.21			N/A
6.1.12 Leg forward static load test	EN 1728:2012, 6.15	10	Edge: 620 N) (Seat: 1800 N)	Passed
6.1.13 Legs sideways static load test	EN 1728:2012, 6.16	10	Edge: 760 N) (Seat: 1800 N)	Passed
6.1.14 Seat impact test	EN 1728:2012, 6.24	10	300 mm	Passed
6.1.15 Back impact test	EN 1728:2012, 6.25	10	330 mm / 48°	Passed
6.1.16 Arm Impact Test	EN 1728:2012, 6.26	10	330 mm / 48°	Passed
6.1.17 Drop test (multiple seating)	EN 1728:2012, 6.27.1			N/A
6.1.18 Auxiliary writing surface static load test	EN 1728:2012, 6.14			N/A
6.1.19 Auxiliary writing surface durability test	EN 1728:2012, 6.22			N/A
7 Information for use	EN 16139, 7			N/A

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Test of model: Palissade Dining Arm Chair

Photo



The general conditions pertaining to assignments accepted by Danish Technological Institute shall apply in full to the technical testing or calibration at Danish Technological Institute and to the completion of test reports or calibration certificates within the relevant field.

Danish Accreditation (DANAK):

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The use of the accreditation mark on test reports and calibration certificates or reference to accreditation, documents that the service is provided as an accredited service under the company's DANAK accreditation according to EN ISO IEC 17025.

Construction Product Directive:

The Danish Technological Institute guarantees that employees carrying out tests to be used together with harmonized standards under notification no. 1235 according to EU regulation 305/2011, article 43, satisfy all the requirements made for capability, integrity and impartiality. You find the CPR here:

http://ec.europa.eu/growth/single-market/european-standards/harmonised-standards/construction-products/index_en.htm

September 2015



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Test Report

Material: Model: Palissade Chair

Type:	Chair				
Length:	580 mm	Width:	460 mm	Height:	800 mm
Weight:	7 kg				
Materials:	Metal chair Ø 25 mm tubes				

Sampling: The test material was sampled by the client and received at the Danish Technological Institute 18-02-2016.

Method: **EN 581-2:2009** Outdoor furniture – Seating and tables for camping, domestic and contract use – Part 2: mechanical safety requirements and test methods for seating. Clauses: 6.1.2, 6.2.2, 6.7, 6.12, 6.13, 6.15.

EN 1022:2005 Domestic furniture - Seating - Determination of stability.

EN 16139:2013 Furniture - Strength, durability and safety - Requirements for non-domestic seating. Clauses 4.1, 4.2.3, 4.3.3, 5, 6.1.1, 6.1.2, 6.1.3, 6.1.8, 6.1.9, 6.1.12, 6.1.13, 6.1.14, 6.1.15.

L2: Extreme use: E.g. in night-clubs, police stations, transport terminals, sport changing rooms, prisons, barracks (non-controlled areas).

Period: The testing was carried out from 23-02-2016 to 29-03-2016.

Result: Model Palissade Chair fulfils the requirements in EN 581-2:2009, EN 1022:2005 and EN 16139:2013. Loading according to Test severity L2. Individual results appear from Appendices 1 and 2.

Storage: The test material will be destroyed after 1 month, unless otherwise agreed.

Terms: The test has been performed according to the attached conditions, which are according to the guidelines laid down by DANAK (The Danish Accreditation). The testing is only valid for the tested specimen. The test report may only be extracted, if the laboratory has approved the extract.

Software: This report was generated by software version 2.21 of 2013-06-06.

30-05-2016, Danish Technological Institute, Wood Technology, Taastrup
Replaces report dated 05-04-2016

Test responsible

Co-reader

Order no. 677359-9 rev 2

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Test of model: Palissade Chair

EN 581-2 Test sequences and test parameters

Test	Reference	Test parameters	Contract	Result
Seat and back static load test ^a	EN 1728:2000, 6.2.1	Seat force N 10×10 s (±2s) + 1×30 min (±10s) Back force, N 10×10 (±2s) + 1×30 min (±10s)	2.000 560 max	Passed
Seat front edge static load test	EN 1728:2000, 6.2.2	Force N 10×10 s (±2s) + 1×30 min (±10s)	1300	Passed
Seat and back fatigue test for seating ^a	EN 1728:2000, 6.7	Cycles Seat, force, N Back: bending moment, Nm	50.000 1.000 100 max	Passed
Fatigue test on back rest mechanism	See Annex A	Cycles Seat load, kg Force, N Back: bending moment Nm	20.000 100 250 100	N/A
Arm downwards static load test	EN 1728:2000, 6.6	Vertical force, N	900 ^b	N/A
Arm fatigue test	EN 1728:2000, 6.10	Cycles Force, N	30.000 400	N/A
Leg forward static load test	EN 1728:2000, 6.12	Seat load, kg Horizontal force, N	100 400	Passed
Leg sideways static load test	EN 1728:2000, 6.13	Seat load, kg Horizontal force, N	100 300	Passed
Seat impact test ^c	EN 1728:2000, 6.15	Drop height, mm 10 times	180	Passed
Foot rail static test for high seating	EN 1728:2000, 6.4	Vertical force, N	1.200	N/A
Forward stability ^{d e}	EN 1022			Passed
Rearward stability ^d	EN 1022			Passed
Sideways stability ^{d e}	EN 1022			Passed
a	If seat and back are of one piece of flexible material (e.g. textile), only the tests on seat shall be carried out.			
b	If arm rest is less than 15 mm wide, carry out test with 700 N for contract use			
c	The application point shall be at least 100 mm from the front edge. This test shall not be carried out on seating with a seat height > 600 mm			
d	In the case of seating, which might not fulfil the stability requirements before carrying out any tests, the applicable stability tests may be carried out before starting the sequence of tests specified in this table.			
e	This test is not applicable for seating with a seat height <200 mm and a mass <5 kg. The height shall be determined by measuring from the floor to the upper seating area on the geometrical centre of the unloaded seat			

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Test of model: Palissade Chair

	Result
6.2 Requirements 6.2.1 General safety requirements The general safety requirements specified in EN 581-1 shall be fulfilled.	Passed
6.2.2. Stability requirements The stability requirements specified in EN 1022 shall be fulfilled.	Passed
6.2.3 Mechanical safety requirements The requirements are fulfilled during and after testing in accordance with Table 1 when: <ul style="list-style-type: none"> a) There are no fractures of any point, member or component b) There is no loosening of joints intended to be rigid c) The seating fulfils its function after removal of the test loads 	Passed
7. Instruction for use 7.1. General Instruction for use shall be provided in the language(s) of the country where the tables are sold. These instructions shall be headed "IMPORTANT, RETAIN FOR FUTURE REFERENCE: READ CAREFULLY" in letters no less than 5 mm high. These instructions shall include at least the following: <ul style="list-style-type: none"> a) Name and address of the producer (manufacturer or supplier) b) Information regarding maintenance c) Conditions for use of the product (camping, domestic or contract) 	N/A

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Test of model: Palissade Chair

EN 16139 - Loading according to Test severity L2.

Test	Test Method	Cycles	Load	Result
4.1 General	EN 16139, 4.1			Passed
4.2.2 Shear and squeeze points under influence of powered mechanisms	EN 16139, 4.2.2			N/A
4.2.3 Shear and squeeze points during use	EN 16139, 4.2.3			N/A
4.3.2 Swivelling chairs	EN 1022			N/A
4.3.3 Non swivelling chairs	EN 1022			Passed
4.4 Rolling resistance of the unloaded chair	EN 16139, 4.4			N/A
5 Strength and durability requirements	EN 16139, 5			Passed
6.1.1 Seat static load and back static load test	EN 1728:2012, 6.4	10 10	Seat: 2000 N Back: 700 N	Passed
6.1.2 Seat front edge static load	EN 1728:2012, 6.5	10	Seat: 1600 N	Passed
6.1.3 Vertical load on back rests	EN 1728:2012, 6.6	10	Back: 900 N Seat: 1800 N	Passed
6.1.4 Foot rest static load test	EN 1728:2012, 6.8			N/A
6.1.4 Leg rest static load test	EN 1728:2012, 6.9			N/A
6.1.5 Arm rest sideways static load test	EN 1728:2012, 6.10	10	900 N	N/A
6.1.6 Arm rest downwards static load test	EN 1728:2012, 6.11	5	900 N	N/A
6.1.7 Vertical upwards static load on arm rests	EN 1728:2012, 6.13			N/A
6.1.8 Combined seat and back durability test	EN 1728:2012, 6.17	200000 200000	Seat: 1000 N Back: 300 N	Passed
6.1.9 Seat front edge durability test	EN 1728:2012, 6.18	100000	800 N	Passed
6.1.10 Arm rest durability test	EN 1728:2012, 6.20	60000	400 N	N/A
6.1.11 Foot rest durability test	EN 1728:2012, 6.21			N/A
6.1.12 Leg forward static load test	EN 1728:2012, 6.15	10	Edge: 620 N) (Seat: 1800 N)	Passed
6.1.13 Legs sideways static load test	EN 1728:2012, 6.16	10	Edge: 760 N) (Seat: 1800 N)	Passed
6.1.14 Seat impact test	EN 1728:2012, 6.24	10	300 mm	Passed
6.1.15 Back impact test	EN 1728:2012, 6.25	10	330 mm / 48°	Passed
6.1.16 Arm Impact Test	EN 1728:2012, 6.26	10	330 mm / 48°	N/A
6.1.17 Drop test (multiple seating)	EN 1728:2012, 6.27.1			N/A
6.1.18 Auxiliary writing surface static load test	EN 1728:2012, 6.14			N/A
6.1.19 Auxiliary writing surface durability test	EN 1728:2012, 6.22			N/A
7 Information for use	EN 16139, 7			N/A

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Test of model: Palissade Chair

Photo



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http://ec.europa.eu/growth/single-market/european-standards/harmonised-standards/construction-products/index_en.htm

September 2015



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Test Report

Material: Model: Palissade Dining Bench – also covers Palissade Ottoman and Palissade Stool

Type:	Chair				
Length:	1095 mm	Width:	412 mm	Height:	450 mm
Weight:	9,90 mm				
Materials:	Metal profiles				

Sampling: The test material was sampled by the client and received at the Danish Technological Institute 31-05-2016.

Method: **EN 581-2:2009** Outdoor furniture – Seating and tables for camping, domestic and contract use – Part 2: mechanical safety requirements and test methods for seating. Clauses: 6.1.2, 6.2, 6.2.1, 6.2.2, 6.2.3, 7, 7.1

EN 1022:2005 Domestic furniture - Seating - Determination of stability.

EN 16139:2013 Furniture - Strength, durability and safety - Requirements for non-domestic seating. Clauses 4.1, 4.2.3, 4.3.3, 5, 6.1.1, 6.1.2, 6.1.3, 6.1.5, 6.1.6, 6.1.8, 6.1.9, 6.1.10, 6.1.12, 6.1.13, 6.1.14, 6.1.15, 6.1.16.

L2: Extreme use: E.g. in night-clubs, police stations, transport terminals, sport changing rooms, prisons, barracks (non-controlled areas).

Period: The testing was carried out from 31-05-2016 to 25-07-2016.

Result: Model Palissade Bench fulfils the requirements in EN 581-2:2009, EN 1022:2005 and EN 16139:2013. Loading according to Test severity L2. Individual results appear from Appendices 1 and 2.

Storage: The test material will be destroyed after 1 month, unless otherwise agreed.

Terms: The test has been performed according to the attached conditions, which are according to the guidelines laid down by DANAK (The Danish Accreditation). The testing is only valid for the tested specimen. The test report may only be extracted, if the laboratory has approved the extract

25-07-2016 Danish Technological Institute, Wood Technology, Taastrup



Lars Jeffers-Hansen
Test responsible



Per A. Nielsen
Co-reader

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Test of model: Palissade Bench

EN 581-2 Test sequences and test parameters

Test	Reference	Test parameters	Contract	Result
Seat and back static load test ^a	EN 1728:2000, 6.2.1	Seat force N 10×10 s (±2s) + 1×30 min (±10s) Back force, N 10×10 (±2s) + 1×30 min (±10s)	2.000 560 max	Passed
Seat front edge static load test	EN 1728:2000, 6.2.2	Force N 10×10 s (±2s) + 1×30 min (±10s)	1300	Passed
Seat and back fatigue test for seating ^a	EN 1728:2000, 6.7	Cycles Seat, force, N Back: bending moment, Nm	50.000 1.000 100 max	Passed
Fatigue test on back rest mechanism	See Annex A	Cycles Seat load, kg Force, N Back: bending moment Nm	20.000 100 250 100	N/A
Arm downwards static load test	EN 1728:2000, 6.6	Vertical force, N	900 ^b	N/A
Arm fatigue test	EN 1728:2000, 6.10	Cycles Force, N	30.000 400	N/A
Leg forward static load test	EN 1728:2000, 6.12	Seat load, kg Horizontal force, N	100 400	Passed
Leg sideways static load test	EN 1728:2000, 6.13	Seat load, kg Horizontal force, N	100 300	Passed
Seat impact test ^c	EN 1728:2000, 6.15	Drop height, mm 10 times	180	Passed
Foot rail static test for high seating	EN 1728:2000, 6.4	Vertical force, N	1.200	N/A
Forward stability ^{d e}	EN 1022			Passed
Rearward stability ^d	EN 1022			Passed
Sideways stability ^{d e}	EN 1022			Passed
a	If seat and back are of one piece of flexible material (e.g. textile), only the tests on seat shall be carried out.			
b	If arm rest is less than 15 mm wide, carry out test with 700 N for contract use			
c	The application point shall be at least 100 mm from the front edge. This test shall not be carried out on seating with a seat height > 600 mm			
d	In the case of seating, which might not fulfil the stability requirements before carrying out any tests, the applicable stability tests may be carried out before starting the sequence of tests specified in this table.			
e	This test is not applicable for seating with a seat height <200 mm and a mass <5 kg. The height shall be determined by measuring from the floor to the upper seating area on the geometrical centre of the unloaded seat			

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Test of model: Palissade Bench

	Result
6.2 Requirements 6.2.1 General safety requirements The general safety requirements specified in EN 581-1 shall be fulfilled.	Passed
6.2.2. Stability requirements The stability requirements specified in EN 1022 shall be fulfilled.	Passed
6.2.3 Mechanical safety requirements The requirements are fulfilled during and after testing in accordance with Table 1 when: <ul style="list-style-type: none"> a) There are no fractures of any point, member or component b) There is no loosening of joints intended to be rigid c) The seating fulfils its function after removal of the test loads 	Passed
7. Instruction for use 7.1. General Instruction for use shall be provided in the language(s) of the country where the tables are sold. These instructions shall be headed "IMPORTANT, RETAIN FOR FUTURE REFERENCE: READ CAREFULLY" in letters no less than 5 mm high. These instructions shall include at least the following: <ul style="list-style-type: none"> a) Name and address of the producer (manufacturer or supplier) b) Information regarding maintenance c) Conditions for use of the product (camping, domestic or contract) 	N/A

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Test of model: Palissade Bench

EN 16139 - Loading according to Test severity L2.

Test	Test Method	Cycles	Load	Result
4.1 General	EN 16139, 4.1			Passed
4.2.2 Shear and squeeze points under influence of powered mechanisms	EN 16139, 4.2.2			N/A
4.2.3 Shear and squeeze points during use	EN 16139, 4.2.3			Passed
4.3.2 Swivelling chairs	EN 1022			N/A
4.3.3 Non swivelling chairs	EN 1022			Passed
4.4 Rolling resistance of the unloaded chair	EN 16139, 4.4			N/A
5 Strength and durability requirements	EN 16139, 5			Passed
6.1.1 Seat static load and back static load test	EN 1728:2012, 6.4	10 10	Seat: 2000 N Back: 700 N	Passed
6.1.2 Seat front edge static load	EN 1728:2012, 6.5	10	Seat: 1600 N	Passed
6.1.3 Vertical load on back rests	EN 1728:2012, 6.6	10	Back: 900 N Seat: 1800 N	N/A
6.1.4 Foot rest static load test	EN 1728:2012, 6.8			N/A
6.1.4 Leg rest static load test	EN 1728:2012, 6.9			N/A
6.1.5 Arm rest sideways static load test	EN 1728:2012, 6.10	10	900 N	N/A
6.1.6 Arm rest downwards static load test	EN 1728:2012, 6.11	5	900 N	N/A
6.1.7 Vertical upwards static load on arm rests	EN 1728:2012, 6.13			N/A
6.1.8 Combined seat and back durability test	EN 1728:2012, 6.17	200000 200000	Seat: 1000 N Back: 300 N	Passed
6.1.9 Seat front edge durability test	EN 1728:2012, 6.18	100000	800 N	Passed
6.1.10 Arm rest durability test	EN 1728:2012, 6.20	60000	400 N	N/A
6.1.11 Foot rest durability test	EN 1728:2012, 6.21			N/A
6.1.12 Leg forward static load test	EN 1728:2012, 6.15	10	Edge: 620 N) (Seat: 1800 N)	Passed
6.1.13 Legs sideways static load test	EN 1728:2012, 6.16	10	Edge: 760 N) (Seat: 1800 N)	Passed
6.1.14 Seat impact test	EN 1728:2012, 6.24	10	300 mm	Passed
6.1.15 Back impact test	EN 1728:2012, 6.25	10	330 mm / 48°	Passed
6.1.16 Arm Impact Test	EN 1728:2012, 6.26	10	330 mm / 48°	N/A
6.1.17 Drop test (multiple seating)	EN 1728:2012, 6.27.1			Passed
6.1.18 Auxiliary writing surface static load test	EN 1728:2012, 6.14			N/A
6.1.19 Auxiliary writing surface durability test	EN 1728:2012, 6.22			N/A
7 Information for use	EN 16139, 7			N/A

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Test of model: Palissade Bench

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Test of model: Palissade Bench



The general conditions pertaining to assignments accepted by Danish Technological Institute shall apply in full to the technical testing or calibration at Danish Technological Institute and to the completion of test reports or calibration certificates within the relevant field.

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http://ec.europa.eu/growth/single-market/european-standards/harmonised-standards/construction-products/index_en.htm

September 2015



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Test Report

Material: Model: Palissade Barstool

Type:	Bar stool				
Length:	440 mm	Width:	370 mm	Height:	790 mm
Weight:	7,15 kg				
Materials:	Ø 25 mm steel chair				

Sampling: The test material was sampled by the client and received at the Danish Technological Institute 18-02-2016.

Method: **EN 581-2:2009** Outdoor furniture – Seating and tables for camping, domestic and contract use – Part 2: mechanical safety requirements and test methods for seating. Clauses: 6.2.1, 6.2.2, 6.7. 6.12, 6.13, 6.15, 6.4.

EN 1022:2005 Domestic furniture - Seating - Determination of stability.

EN 16139:2013 Furniture - Strength, durability and safety - Requirements for non-domestic seating. Clauses 4.1, 4.2.3, 4.3.3, 5, 6.1.1, 6.1.2, 6.1.3, 6.1.5, 6.1.6, 6.1.8, 6.1.9, 6.1.10, 6.1.12, 6.1.13, 6.1.14, 6.1.15, 6.1.16.

L2: Extreme use: E.g. in night-clubs, police stations, transport terminals, sport changing rooms, prisons, barracks (non-controlled areas).

Period: The testing was carried out from 23-02-2016 to 29-03-2016.

Result: Model Palissade Barstool fulfils the requirements in EN 581-2:2009, EN 1022:2005 and EN 16139:2013. Loading according to Test severity L2. Individual results appear from Appendices 1 and 2.

Storage: The test material will be destroyed after 1 month, unless otherwise agreed.

Terms: The test has been performed according to the attached conditions, which are according to the guidelines laid down by DANAK (The Danish Accreditation). The testing is only valid for the tested specimen. The test report may only be extracted, if the laboratory has approved the extract.

Software: This report was generated by software version 2.21 of 2013-06-06.

30-05-2016, Danish Technological Institute, Wood Technology, Taastrup
Replaces report dated 06-04-2016

Test responsible

Co-reader

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Test of model: Palissade Barstool

EN 581-2 Test sequences and test parameters

Test	Reference	Test parameters	Contract	Result
Seat and back static load test ^a	EN 1728:2000, 6.2.1	Seat force N 10×10 s (±2s) + 1×30 min (±10s) Back force, N 10×10 (±2s) + 1×30 min (±10s)	2.000 560 max	Passed
Seat front edge static load test	EN 1728:2000, 6.2.2	Force N 10×10 s (±2s) + 1×30 min (±10s)	1300	Passed
Seat and back fatigue test for seating ^a	EN 1728:2000, 6.7	Cycles Seat, force, N Back: bending moment, Nm	50.000 1.000 100 max	Passed
Fatigue test on back rest mechanism	See Annex A	Cycles Seat load, kg Force, N Back: bending moment Nm	20.000 100 250 100	N/A
Arm downwards static load test	EN 1728:2000, 6.6	Vertical force, N	900 ^b	N/A
Arm fatigue test	EN 1728:2000, 6.10	Cycles Force, N	30.000 400	N/A
Leg forward static load test	EN 1728:2000, 6.12	Seat load, kg Horizontal force, N	100 400	Passed
Leg sideways static load test	EN 1728:2000, 6.13	Seat load, kg Horizontal force, N	100 300	Passed
Seat impact test ^c	EN 1728:2000, 6.15	Drop height, mm 10 times	180	Passed
Foot rail static test for high seating	EN 1728:2000, 6.4	Vertical force, N	1.200	Passed
Forward stability ^{d e}	EN 1022			Passed
Rearward stability ^d	EN 1022			Passed
Sideways stability ^{d e}	EN 1022			Passed
a	If seat and back are of one piece of flexible material (e.g. textile), only the tests on seat shall be carried out.			
b	If arm rest is less than 15 mm wide, carry out test with 700 N for contract use			
c	The application point shall be at least 100 mm from the front edge. This test shall not be carried out on seating with a seat height > 600 mm			
d	In the case of seating, which might not fulfil the stability requirements before carrying out any tests, the applicable stability tests may be carried out before starting the sequence of tests specified in this table.			
e	This test is not applicable for seating with a seat height <200 mm and a mass <5 kg. The height shall be determined by measuring from the floor to the upper seating area on the geometrical centre of the unloaded seat			

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Test of model: Palissade Barstool

	Result
6.2 Requirements	
6.2.1 General safety requirements The general safety requirements specified in EN 581-1 shall be fulfilled.	Passed
6.2.2. Stability requirements The stability requirements specified in EN 1022 shall be fulfilled.	Passed
6.2.3 Mechanical safety requirements The requirements are fulfilled during and after testing in accordance with Table 1 when: <ul style="list-style-type: none"> a) There are no fractures of any point, member or component b) There is no loosening of joints intended to be rigid c) The seating fulfils its function after removal of the test loads 	Passed
7. Instruction for use 7.1. General Instruction for use shall be provided in the language(s) of the country where the tables are sold. These instructions shall be headed "IMPORTANT, RETAIN FOR FUTURE REFERENCE: READ CAREFULLY" in letters no less than 5 mm high. These instructions shall include at least the following: <ul style="list-style-type: none"> a) Name and address of the producer (manufacturer or supplier) b) Information regarding maintenance c) Conditions for use of the product (camping, domestic or contract) 	N/A

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Test of model: Palissade Barstool

Loading according to Test severity L2.

Test	Test Method	Cycles	Load	Result
4.1 General	EN 16139, 4.1			Passed
4.2.2 Shear and squeeze points under influence of powered mechanisms	EN 16139, 4.2.2			N/A
4.2.3 Shear and squeeze points during use	EN 16139, 4.2.3			Passed
4.3.2 Swivelling chairs	EN 1022			N/A
4.3.3 Non swivelling chairs	EN 1022			Passed
4.4 Rolling resistance of the unloaded chair	EN 16139, 4.4			N/A
5 Strength and durability requirements	EN 16139, 5			Passed
6.1.1 Seat static load and back static load test	EN 1728:2012, 6.4	10 10	Seat: 2000 N Back: 700 N	Passed
6.1.2 Seat front edge static load	EN 1728:2012, 6.5	10	Seat: 1600 N	Passed
6.1.3 Vertical load on back rests	EN 1728:2012, 6.6	10	Back: 900 N Seat: 1800 N	Passed
6.1.4 Foot rest static load test	EN 1728:2012, 6.8			Passed
6.1.4 Leg rest static load test	EN 1728:2012, 6.9			N/A
6.1.5 Arm rest sideways static load test	EN 1728:2012, 6.10			N/A
6.1.6 Arm rest downwards static load test	EN 1728:2012, 6.11			N/A
6.1.7 Vertical upwards static load on arm rests	EN 1728:2012, 6.13			N/A
6.1.8 Combined seat and back durability test	EN 1728:2012, 6.17	200000 200000	Seat: 1000 N Back: 300 N	Passed
6.1.9 Seat front edge durability test	EN 1728:2012, 6.18	100000	800 N	Passed
6.1.10 Arm rest durability test	EN 1728:2012, 6.20			N/A
6.1.11 Foot rest durability test	EN 1728:2012, 6.21			Passed
6.1.12 Leg forward static load test	EN 1728:2012, 6.15	10	Edge: 620 N) (Seat: 1800 N)	Passed
6.1.13 Legs sideways static load test	EN 1728:2012, 6.16	10	Edge: 760 N) (Seat: 1800 N)	Passed
6.1.14 Seat impact test	EN 1728:2012, 6.24	10	300 mm	Passed
6.1.15 Back impact test	EN 1728:2012, 6.25	10	330 mm / 48°	Passed
6.1.16 Arm Impact Test	EN 1728:2012, 6.26			N/A
6.1.17 Drop test (multiple seating)	EN 1728:2012, 6.27.1			N/A
6.1.18 Auxiliary writing surface static load test	EN 1728:2012, 6.14			N/A
6.1.19 Auxiliary writing surface durability test	EN 1728:2012, 6.22			N/A
7 Information for use	EN 16139, 7			N/A

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Test of model: Palissade Barstool

Photo



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http://ec.europa.eu/growth/single-market/european-standards/harmonised-standards/construction-products/index_en.htm

September 2015



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Test Report

Material: Model: Palissade Chair

Type:	Chair				
Length:	570 mm	Width:	517 mm	Height:	805 mm
Weight:	8,25 mm				
Materials:	Metal tubes				

Sampling: The test material was sampled by the client and received at the Danish Technological Institute 31-05-2016.

Method: **EN 581-2:2009** Outdoor furniture – Seating and tables for camping, domestic and contract use – Part 2: mechanical safety requirements and test methods for seating. Clauses: 6.1.2, 6.2, 6.2.1, 6.2.2, 6.2.3, 7, 7.1

EN 1022:2005 Domestic furniture - Seating - Determination of stability.

EN 16139:2013 Furniture - Strength, durability and safety - Requirements for non-domestic seating. Clauses 4.1, 4.2.3, 4.3.3, 5, 6.1.1, 6.1.2, 6.1.3, 6.1.5, 6.1.6, 6.1.8, 6.1.9, 6.1.10, 6.1.12, 6.1.13, 6.1.14, 6.1.15, 6.1.16.

L2: Extreme use: E.g. in night-clubs, police stations, transport terminals, sport changing rooms, prisons, barracks (non-controlled areas).

Period: The testing was carried out from 31-05-2016 to 25-07-2016.

Result: Model Palissade Chair fulfils the requirements in EN 581-2:2009, EN 1022:2005 and EN 16139:2013. Loading according to Test severity L2. Individual results appear from Appendix 1.

Storage: The test material will be destroyed after 1 month, unless otherwise agreed.

Terms: The test has been performed according to the attached conditions, which are according to the guidelines laid down by DANAK (The Danish Accreditation). The testing is only valid for the tested specimen. The test report may only be extracted, if the laboratory has approved the extract

25-07-2016 Danish Technological Institute, Wood Technology, Taastrup



Lars Jeffers-Hansen
Test responsible



Per A. Nielsen
Co-reader

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Test of model: Palissade Chair

EN 581-2 Test sequences and test parameters

Test	Reference	Test parameters	Contract	Result
Seat and back static load test ^a	EN 1728:2000, 6.2.1	Seat force N 10×10 s (±2s) + 1×30 min (±10s) Back force, N 10×10 (±2s) + 1×30 min (±10s)	2.000 560 max	Passed
Seat front edge static load test	EN 1728:2000, 6.2.2	Force N 10×10 s (±2s) + 1×30 min (±10s)	1300	Passed
Seat and back fatigue test for seating ^a	EN 1728:2000, 6.7	Cycles Seat, force, N Back: bending moment, Nm	50.000 1.000 100 max	Passed
Fatigue test on back rest mechanism	See Annex A	Cycles Seat load, kg Force, N Back: bending moment Nm	20.000 100 250 100	N/A
Arm downwards static load test	EN 1728:2000, 6.6	Vertical force, N	900 ^b	Passed
Arm fatigue test	EN 1728:2000, 6.10	Cycles Force, N	30.000 400	Passed
Leg forward static load test	EN 1728:2000, 6.12	Seat load, kg Horizontal force, N	100 400	Passed
Leg sideways static load test	EN 1728:2000, 6.13	Seat load, kg Horizontal force, N	100 300	Passed
Seat impact test ^c	EN 1728:2000, 6.15	Drop height, mm 10 times	180	Passed
Foot rail static test for high seating	EN 1728:2000, 6.4	Vertical force, N	1.200	N/A
Forward stability ^{d e}	EN 1022			Passed
Rearward stability ^d	EN 1022			Passed
Sideways stability ^{d e}	EN 1022			Passed
a	If seat and back are of one piece of flexible material (e.g. textile), only the tests on seat shall be carried out.			
b	If arm rest is less than 15 mm wide, carry out test with 700 N for contract use			
c	The application point shall be at least 100 mm from the front edge. This test shall not be carried out on seating with a seat height > 600 mm			
d	In the case of seating, which might not fulfil the stability requirements before carrying out any tests, the applicable stability tests may be carried out before starting the sequence of tests specified in this table.			
e	This test is not applicable for seating with a seat height <200 mm and a mass <5 kg. The height shall be determined by measuring from the floor to the upper seating area on the geometrical centre of the unloaded seat			

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Test of model: Palissade Chair

	Result
6.2 Requirements 6.2.1 General safety requirements The general safety requirements specified in EN 581-1 shall be fulfilled.	Passed
6.2.2. Stability requirements The stability requirements specified in EN 1022 shall be fulfilled.	Passed
6.2.3 Mechanical safety requirements The requirements are fulfilled during and after testing in accordance with Table 1 when: <ul style="list-style-type: none"> a) There are no fractures of any point, member or component b) There is no loosening of joints intended to be rigid c) The seating fulfils its function after removal of the test loads 	Passed
7. Instruction for use 7.1. General Instruction for use shall be provided in the language(s) of the country where the tables are sold. These instructions shall be headed "IMPORTANT, RETAIN FOR FUTURE REFERENCE: READ CAREFULLY" in letters no less than 5 mm high. These instructions shall include at least the following: <ul style="list-style-type: none"> a) Name and address of the producer (manufacturer or supplier) b) Information regarding maintenance c) Conditions for use of the product (camping, domestic or contract) 	N/A

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Test of model: Palissade Chair

EN 16139 - Loading according to Test severity L2.

Test	Test Method	Cycles	Load	Result
4.1 General	EN 16139, 4.1			Passed
4.2.2 Shear and squeeze points under influence of powered mechanisms	EN 16139, 4.2.2			Passed
4.2.3 Shear and squeeze points during use	EN 16139, 4.2.3			Passed
4.3.2 Swivelling chairs	EN 1022			N/A
4.3.3 Non swivelling chairs	EN 1022			Passed
4.4 Rolling resistance of the unloaded chair	EN 16139, 4.4			N/A
5 Strength and durability requirements	EN 16139, 5			Passed
6.1.1 Seat static load and back static load test	EN 1728:2012, 6.4	10 10	Seat: 2000 N Back: 700 N	Passed
6.1.2 Seat front edge static load	EN 1728:2012, 6.5	10	Seat: 1600 N	Passed
6.1.3 Vertical load on back rests	EN 1728:2012, 6.6	10	Back: 900 N Seat: 1800 N	Passed
6.1.4 Foot rest static load test	EN 1728:2012, 6.8			N/A
6.1.4 Leg rest static load test	EN 1728:2012, 6.9			N/A
6.1.5 Arm rest sideways static load test	EN 1728:2012, 6.10	10	900 N	Passed
6.1.6 Arm rest downwards static load test	EN 1728:2012, 6.11	5	900 N	Passed
6.1.7 Vertical upwards static load on arm rests	EN 1728:2012, 6.13			N/A
6.1.8 Combined seat and back durability test	EN 1728:2012, 6.17	200000 200000	Seat: 1000 N Back: 300 N	Passed
6.1.9 Seat front edge durability test	EN 1728:2012, 6.18	100000	800 N	Passed
6.1.10 Arm rest durability test	EN 1728:2012, 6.20	60000	400 N	Passed
6.1.11 Foot rest durability test	EN 1728:2012, 6.21			N/A
6.1.12 Leg forward static load test	EN 1728:2012, 6.15	10	Edge: 620 N) (Seat: 1800 N)	Passed
6.1.13 Legs sideways static load test	EN 1728:2012, 6.16	10	Edge: 760 N) (Seat: 1800 N)	Passed
6.1.14 Seat impact test	EN 1728:2012, 6.24	10	300 mm	Passed
6.1.15 Back impact test	EN 1728:2012, 6.25	10	330 mm / 48°	Passed
6.1.16 Arm Impact Test	EN 1728:2012, 6.26	10	330 mm / 48°	Passed
6.1.17 Drop test (multiple seating)	EN 1728:2012, 6.27.1			N/A
6.1.18 Auxiliary writing surface static load test	EN 1728:2012, 6.14			N/A
6.1.19 Auxiliary writing surface durability test	EN 1728:2012, 6.22			N/A
7 Information for use	EN 16139, 7			N/A

Order no. 700843-1
Appendix 2
Page 1 of 1
Initials laha/prni/hbs

Test of model: Palissade Chair

Photo



The general conditions pertaining to assignments accepted by Danish Technological Institute shall apply in full to the technical testing or calibration at Danish Technological Institute and to the completion of test reports or calibration certificates within the relevant field.

Danish Accreditation (DANAK):

DANAK is the national accreditation body in Denmark in compliance with EU regulation No. 765/2008.

DANAK participates in the multilateral agreements for testing and calibration under European co-operation for Accreditation (EA) and under International Laboratory Accreditation Cooperation (ILAC) based on peer evaluation. Accredited test reports and calibration certificates issued by laboratories accredited by DANAK are recognized cross border by members of EA and ILAC equal to test reports and calibration certificates issued by these members' accredited laboratories.

The use of the accreditation mark on test reports and calibration certificates or reference to accreditation, documents that the service is provided as an accredited service under the company's DANAK accreditation according to EN ISO IEC 17025.

Construction Product Regulation:

The Danish Technological Institute guarantees that employees carrying out tests to be used together with harmonized standards under notification no. 1235 according to EU regulation 305/2011, article 43, satisfy all the requirements made for capability, integrity and impartiality. You find the CPR here:

http://ec.europa.eu/growth/single-market/european-standards/harmonised-standards/construction-products/index_en.htm

September 2015



Test Report

Report No: 877705-13/14

Assignor: HAY A/S
Havnen 1
DK-8700 Horsens

Page 1 of 1
Jju/jha/hbs
Order no.: 877705
No. of appendices: 4

Subject: Model: Palissade Dining Bench

Type:	Bench				
Depth:	690 mm	Length:	1020 mm	Height:	800 mm
Weight:	19 kg				
Materials:	Powder coated metal				

Sampling: The test material was sampled by the client and received at the Danish Technological Institute 21-10-2019.

Method: **EN 581-1:2017** Outdoor furniture – Seating and tables for camping, domestic and contract use – Part 1: General safety requirements

EN 581-2:2015 Outdoor furniture – seating and tables for camping, domestic and contract use – Part 2: Mechanical safety requirements and test methods for seating

EN 16139:2013 Furniture - Strength, durability and safety - Requirements for non-domestic seating.

Clauses 4.1, 4.2.3, 4.3.3, 5, 6.1.1, 6.1.2, 6.1.3, 6.1.5, 6.1.6, 6.1.8, 6.1.9, 6.1.10, 6.1.12, 6.1.13, 6.1.14, 6.1.15, 6.1.16.

L2: Extreme use: E.g. in night-clubs, police stations, transport terminals, sport changing rooms, prisons, barracks (non-controlled areas).

Period: The testing was carried out from 24-10-2019 to 04-12-2019.

Result: Model Palissade Dining Bench fulfils the requirements in EN 581-1:2017, EN 581-2:2015 and EN 16139, L2.

Individual results appear from Appendices 1, 2 and 3.

Storage: The test material will be destroyed after 1 month, unless otherwise agreed.

Terms: Accredited testing was carried out in compliance with international requirements (EN/ISO/IEC 17025:2005) and in compliance with Danish Technological Institute's General Terms and Conditions regarding Commissioned Work accepted by Danish Technological Institute. The test results apply to the tested products only. This report may be quoted in extract only if the laboratory has granted its written consent.

Date/place: 05-12-2019, Danish Technological Institute, Wood and Biomaterials, Taastrup

Signature: Test responsible

Co-signatory



Report no. 877705-13/14
 Appendix 1
 Page 1 of 1
 Initials Jju/jha/hbs

Test of Model: Palissade Dining Bench

EN 581-1:2017

Test	Safety Requirements	Result
5.1	General	Passed
5.2	Tubular components	Passed
5.3	Shear and squeeze points	
5.3.1	Shear and squeeze points when erecting, adjusting and folding away	N/A
5.3.2	Shear and squeeze points under the influence of powered mechanisms	N/A
5.3.3	Shear and squeeze points during use	Passed

Reference is made to annexes A + B in EN 581-1:2017.

Test of Model: Palissade Dining Bench

EN 581-2:2015 - Test sequences and test parameters for other than loungers

Table 2

	Test	Reference	Test parameters	Camping	Domestic	Contract	Result
7	Safety, strength and durability requirements for other seating						
7.1	General						
7.2	Stability, strength and durability						
7.2.1	Test sequence and parameters:						
1	Seat static and back static load test ^a	EN 1728:2012, 6.4	Specified seat load, N Load applied on seat not being tested, N Specified backrest load, N Minimum specified force F2 (back) N Cycles Additional cycle 30 min. ± 10 s	1100 750 - - 10 1	1600 750 410 360 10 1	2000 750 560 500 10 1	Passed
2	Seat front edge static load	EN 1728:2012, 6.5	Specified force, N Seat load, N Cycles	1100 750 10	1300 750 10	1300 750 10	Passed
3	Combined seat and back durability test ^a	EN 1728:2012, 6.17	Specified seat load, N Seat load, N Specified backrest load, N Minimum specified force F4 (back) N Cycles	1000 750 250 220 12500	1000 750 333 300 25000	1000 750 333 300 50000	Passed
4	Durability test on seating with a multi-position back rest	EN 1728:2012, 6.19	Seat load, N Specified force, N Cycles	750 190 5000	750 250 10000	750 250 20000	N/A
5	Arm rest static load test	EN 1728:2012, 6.11	Vertical specified force, N	-	700	900 ^b	N/A
6	Arm rest durability test	EN 1728:2012, 6.20	Specified force, N Cycles	400 5000	400 10000	400 30000	N/A
7	Leg forward static load test	EN 1728:2012, 6.15	Seat load, N Horizontal specified forces, N Minimum specified force, N Cycles	750 250 150 10	1000 300 175 10	1000 400 250 10	Passed

Test of Model: Palissade Dining Bench

	Test	Reference	Test parameters	Camping	Domestic	Contract	Result
8	Leg sideways static load test	EN 1728:2012, 6.16	Seat load, N Horizontal specified forces, N Minimum specified force, N Cycles	750 200 150 10	1000 300 175 10	1000 300 200 10	Passed
9	Seat impact test ^c	EN 1728:2012, 6.24	Drop height, mm Cycles	140 10	180 10	240 10	Passed
10	Footrest static test ^d	EN 1728:2012, 6.8	Vertical specified force, N Cycles	- 10	1000 10	1200 10	N/A
11	Forward stability ^{e f}	EN 1022					Passed
12	Rearward stability ^f	EN 1022					Passed
13	Sideways stability ^{e f}	EN 1022					Passed
7.2.2	Requirements The safety, strength and durability requirements are fulfilled after testing in accordance with Table 2 when: a) There are no fractures of any joint, member or component b) There is no loosening of joints intended to be rigid c) The seating fulfils its function after removal of the test loads d) The seating fulfils the safety requirements e) The product shall not overturn when subjected to the stability tests						Passed
	a If seat and back are of one piece of flexible material (e.g. textile), only the tests on seat shall be carried out. b If armrest is less than 15 mm wide, carry out test with 700 N for contract use c The application point shall be at least 100 mm from the front edge. This test shall not be carried out on seating with a seat height. >600 mm d This test is carried out only on seating with a seat height >700 mm e This test is not applicable for seating with a seat height <200 mm and a mass <5 kg. The height shall be determined by measuring from the floor to the upper seating area on the geometrical centre of the unloaded seat f In the case of seating, which might not fulfil the stability requirements before carrying out any tests, the applicable stability tests may be carried out before starting the sequence of tests specified in this table.						

Order no.: 877705-13/14
 Appendix: 4
 Page: 1 of 1
 Initials: Jju/jha/hbs

Test of Model: Palissade Dining Bench

Loading according to Test severity L2.

Test	Test Method	Cycles	Load	Result
4.1 General	EN 16139, 4.1			Passed
4.2.2 Shear and squeeze points under influence of powered mechanisms	EN 16139, 4.2.2			N/A
4.2.3 Shear and squeeze points during use	EN 16139, 4.2.3			Passed
4.3.2 Swivelling chairs	EN 1022/EN 1335			N/A
4.3.3 Non-swivelling chairs	EN 1022			Passed
4.4 Rolling resistance of the unloaded chair	EN 16139, 4.4			N/A
5 Strength and durability requirements	EN 16139, 5			Passed
6.1.1 Seat static load and back static load test	EN 1728:2012, 6.4	10 10	Seat: 2000 N Back: 700 N	Passed
6.1.2 Seat front edge static load	EN 1728:2012, 6.5	10	Seat: 1600 N	Passed
6.1.3 Vertical load on back rests	EN 1728:2012, 6.6	10	Back: 900 N Seat: 1800 N	Passed
6.1.4 Foot rest static load test	EN 1728:2012, 6.8			N/A
6.1.4 Leg rest static load test	EN 1728:2012, 6.9			N/A
6.1.5 Arm rest sideways static load test	EN 1728:2012, 6.10	10	900 N	N/A
6.1.6 Arm rest downwards static load test	EN 1728:2012, 6.11	5	900 N	N/A
6.1.7 Vertical upwards static load on arm rests	EN 1728:2012, 6.13			N/A
6.1.8 Combined seat and back durability test	EN 1728:2012, 6.17	200000 200000	Seat: 1000 N Back: 300 N	Passed
6.1.9 Seat front edge durability test	EN 1728:2012, 6.18	100000	800 N	Passed
6.1.10 Arm rest durability test	EN 1728:2012, 6.20	60000	400 N	N/A
6.1.11 Foot rest durability test	EN 1728:2012, 6.21			N/A
6.1.12 Leg forward static load test	EN 1728:2012, 6.15	10	Edge: 620 N) (Seat: 1800 N)	Passed
6.1.13 Legs sideways static load test	EN 1728:2012, 6.16	10	Edge: 760 N) (Seat: 1800 N)	Passed
6.1.14 Seat impact test	EN 1728:2012, 6.24	10	300 mm	Passed
6.1.15 Back impact test	EN 1728:2012, 6.25	10	330 mm / 48°	Passed
6.1.16 Arm Impact Test	EN 1728:2012, 6.26	10	330 mm / 48°	N/A
6.1.17 Drop test (multiple seating)	EN 1728:2012, 6.27.1			Passed
6.1.18 Auxiliary writing surface static load test	EN 1728:2012, 6.14			N/A
6.1.19 Auxiliary writing surface durability test	EN 1728:2012, 6.22			N/A
7 Information for use	EN 16139, 7			N/A

Order no.: 877705-13/14
Appendix: 4
Page: 1 of 1
Initials: Jju/jha/hbs

Test of Model: Palissade Dining Bench

Photo



Test Report

Report No.: 792549-6



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Page 1 of 1
Prni/jjoh/hbs
Order no.:
No. of appendices: 2

Subject: Model: Cone Table Ø60 cm x H105 cm

Type:	Table				
Length:	Ø600 mm	Width:		Height:	740 mm
Weight	45.2 kg				
Materials:	Painted steel				

Sampling: The test material was sampled by the client and received at the Danish Technological Institute 25-01-2018.

Method: EN 15372:2016 Furniture – Strength, durability and safety – Requirements for non-domestic tables.

Test level 3 Severe: Night-clubs, police stations, transport terminals, hospital public areas, casinos, homes for the elderly, sports changing rooms, prisons, barracks

Period: The testing was carried out from 15-01-2018 to 29-01-2018.

Result: Model Cone Table Ø60 cm x H105 cm fulfils the requirements in EN 15372:2016, L3.

Individual results appear from Appendix 1.

Storage: The test material will be destroyed after 1 month, unless otherwise agreed.

Terms: The accredited test was carried out according to DANAK's general conditions see www.danak.dk and according to the General Terms and Conditions regarding Commissioned Work Accepted by the Danish Technological Institute, which apply at the time of signing the agreement. The test is only valid for the tested specimen. The test report may only be extracted, if the laboratory has approved the extract.

Date/place: 29-01-2018, Danish Technological Institute, Wood and Biomaterials, Taastrup

Signature: Test responsible

Co-signatory



Order no.: 792549-6
Appendix: 1
Page: 1 of 1
Initials: Prni/jjoh/hbs

Test of Model: Cone Table Ø60 cm x H105 cm

EN 15372:2016

Test	Test Method	Cycles	3	Result
5.1	General requirements			Passed
5.4.1 – Table:				
1	Horizontal static load test	EN 1730:2012, 6.2	Test force F_{1-4} , N: Type 1 Type 2 Min. force Type 1 and Type 2 Specified mass, kg Cycles	600 300 100 Manufacturer's specified load or 50 kg 10 Passed
2	Vertical static load on main surface ^a	EN 1730:2012, 6.3.1	Test force, N Cycles	1.250 10 Passed
3	Additional vertical static load test where the main surface has a length >1600 mm	EN 1730:2012, 6.3.2	Test force, N Cycles	1.000 10 N/A
4	Vertical static load on ancillary surface	EN 1730:2012, 6.3.3	Test force, N Cycles	300 10 N/A
5	Horizontal durability test	EN 1730:2012, 6.4.1 and 6.4.2	Test force F_{a-d} , N Specified mass, kg Cycles	300 Manufacturer's specified load or 50 kg 20.000 Passed
6	Vertical durability test for cantilever and tables with central column only ^b	EN 1730:2012, 6.5	Test force, N Cycles	300 20.000 Passed
7	Vertical impact test for glass tabletops	EN 1730:2012, 6.6.1 and 6.6.2	Drop height, mm: Safety glass ^c Other glass Cycles	180 240 10 N/A
8	Vertical impact test for all other tabletops	EN 1730:2012, 6.6.1 and 6.6.3	Drop height, mm: Cycles	180 10 Passed
9	Drop test – This test is applicable for tables weighing more than 20 kg only	EN 1730:2012, 6.9	Nom. drop height mm – tables without glass Nom. drop height mm – tables with glass	100 50 Passed
10	Stability under vertical load test	EN 1730:2012, 7.2	Test force, N Main surface V_1 V_2 Ancillary surface V_1 V_2	200 400 100 200 Passed
11	Stability for tables with extension elements	EN 1730:2012, 7.3	Test force, N	200 N/A
<p>^a Tables with extension pieces shall be tested both in the extended and unextended configurations. A table extension added in the centre of the table shall be tested as the main surface. A part of the main surface in the unextended configuration can become an ancillary surface in the extended configuration.</p> <p>^b Examples of cantilever tables and tables with a central column are shown in EN 1730:2012, figures 6b and 6d</p> <p>^c Glass is considered to be safety glass, if the glass fulfils the requirements in EN 12150-1:2015, Clause 8, fragmentation test; or where the mode of breakage (β) according to EN 12600:2002 is Type B or Type C</p>				
N/A Not applicable				

Order no.: 792549-6
Appendix: 2
Page: 1 of 1
Initials: Prni/jjoh/hbs

Test of Model: Cone Table Ø60 cm x H105 cm

Photo



Test Report

Report No.: 792549-5



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Page 1 of 1
Prni/jjoh/hbs
Order no.:
No. of appendices: 2

Subject: Model: Cone Table Ø90 cm x H74 cm – also covers
Cone Table Ø70 cm x H74 cm
Cone Table 65 cm x 65 cm x 74 cm

Type:	Table				
Length:	Ø900 mm	Width:		Height:	740 mm
Weight	45.2 kg				
Materials:	Painted steel				

Sampling: The test material was sampled by the client and received at the Danish Technological Institute 12-01-2018.

Method: EN 15372:2016 Furniture – Strength, durability and safety – Requirements for non-domestic tables.

Test level 3 Severe: Night-clubs, police stations, transport terminals, hospital public areas, casinos, homes for the elderly, sports changing rooms, prisons, barracks

Period: The testing was carried out from 15-01-2018 to 19-01-2018.

Result: Model Cone Table Ø90 cm x H74 cm fulfils the requirements in EN 15372:2016, L3.

Individual results appear from Appendix 1.

Storage: The test material will be destroyed after 1 month, unless otherwise agreed.

Terms: The accredited test was carried out according to DANAK's general conditions see www.danak.dk and according to the General Terms and Conditions regarding Commissioned Work Accepted by the Danish Technological Institute, which apply at the time of signing the agreement. The test is only valid for the tested specimen. The test report may only be extracted, if the laboratory has approved the extract.

Date/place: 19-01-2018, Danish Technological Institute, Wood and Biomaterials, Taastrup

Signature: Test responsible

Co-signatory



Order no.: 792549-5
Appendix: 1
Page: 1 of 1
Initials: Prni/jjoh/hbs

Test of Model: Cone Table Ø90 cm x H74 cm

EN 15372:2016

Test	Test Method	Cycles	3	Result
5.1	General requirements			Passed
5.4.1 – Table:				
1	Horizontal static load test	EN 1730:2012, 6.2	Test force F_{1-4} , N: Type 1 Type 2 Min. force Type 1 and Type 2 Specified mass, kg Cycles	600 300 100 Manufacturer's specified load or 50 kg 10 Passed
2	Vertical static load on main surface ^a	EN 1730:2012, 6.3.1	Test force, N Cycles	1.250 10 Passed
3	Additional vertical static load test where the main surface has a length >1600 mm	EN 1730:2012, 6.3.2	Test force, N Cycles	1.000 10 N/A
4	Vertical static load on ancillary surface	EN 1730:2012, 6.3.3	Test force, N Cycles	300 10 N/A
5	Horizontal durability test	EN 1730:2012, 6.4.1 and 6.4.2	Test force F_{a-d} , N Specified mass, kg Cycles	300 Manufacturer's specified load or 50 kg 20.000 Passed
6	Vertical durability test for cantilever and tables with central column only ^b	EN 1730:2012, 6.5	Test force, N Cycles	300 20.000 Passed
7	Vertical impact test for glass tabletops	EN 1730:2012, 6.6.1 and 6.6.2	Drop height, mm: Safety glass ^c Other glass Cycles	180 240 10 N/A
8	Vertical impact test for all other tabletops	EN 1730:2012, 6.6.1 and 6.6.3	Drop height, mm: Cycles	180 10 Passed
9	Drop test – This test is applicable for tables weighing more than 20 kg only	EN 1730:2012, 6.9	Nom. drop height mm – tables without glass Nom. drop height mm – tables with glass	100 50 Passed
10	Stability under vertical load test	EN 1730:2012, 7.2	Test force, N Main surface V_1 V_2 Ancillary surface V_1 V_2	200 400 100 200 Passed
11	Stability for tables with extension elements	EN 1730:2012, 7.3	Test force, N	200 N/A
<p>^a Tables with extension pieces shall be tested both in the extended and unextended configurations. A table extension added in the centre of the table shall be tested as the main surface. A part of the main surface in the unextended configuration can become an ancillary surface in the extended configuration.</p> <p>^b Examples of cantilever tables and tables with a central column are shown in EN 1730:2012, figures 6b and 6d</p> <p>^c Glass is considered to be safety glass, if the glass fulfils the requirements in EN 12150-1:2015, Clause 8, fragmentation test; or where the mode of breakage (β) according to EN 12600:2002 is Type B or Type C</p>				
N/A Not applicable				

Order no.: 792549-5
Appendix: 2
Page: 1 of 1
Initials: Prni/jjoh/hbs

Test of Model: Cone Table Ø90 cm x H74 cm

Photo

