

Test Report

Report Number:
250251-37-NDS



**DANISH
TECHNOLOGICAL
INSTITUTE**

Gregersensvej 1
DK-2630 Taastrup
+45 72 20 20 00
info@teknologisk.dk
www.teknologisk.dk

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Init.: JHA/JNAS
Order no.: 250251
Encl.: 2

Assignor: FREDERICIA FURNITURE A/S, Treldevej 183, DK-7000 Fredericia

Item: **3422 Plan Wood Chair** - The test also covers model No. 3423. See enclosure B for detailed sample description.

Sampling: The assignor confirms having selected the product. The product was forwarded by the assignor and received at Danish Technological Institute on 28 November 2025.

Period: The test took place from 3 December 2025 to 8 January 2026.

Method: EN 16139:2025, Furniture - Strength, durability and safety - Requirements for non domestic seating
EN 16139 Test severity L2: Extreme use: E.g. in night-clubs, police stations, transport terminals, sport changing rooms, prisons, barracks.
Additional information is given in enclosure B.

Test results: **Passed.**
Not tested according to clause(s) 5.
The detailed results are shown in enclosure A.

Terms: This test was conducted accredited in accordance with international requirements (ISO/IEC 17025:2017) and in accordance with the General Terms and Conditions of Danish Technological Institute. The test results solely apply to the tested item. This test report may be quoted in extract only if Danish Technological Institute has granted its written consent. Storage: The test material will be destroyed after 1 month, unless otherwise agreed.

Place: Danish Technological Institute, Taastrup, Building and Construction

Signature: This document is only valid with a digital signature from Danish Technological Institute. The date of issue appears from the digital signature.
Jan Hansen
Technical consultant



DANAK

TEST Reg.no. 2



Test of Model: 3422 Plan Wood Chair

Loading according to test severity L2.

4 Safety

Test no.	Test	Test Method	Result
4.1	General requirements	EN 16139, 4.1	Passed
4.2	Holes and tubular/rigid components	EN 16139, 4.2	N/A
4.3.2	Shear and compression points when setting up and folding	EN 16139, 4.3.2	N/A
4.3.3	Shear and compression points under influence of non-electrically powered mechanisms	EN 16139, 4.3.3	N/A
4.3.4	Shear and compression points during use	EN 16139, 4.3.4	Passed

4.4 Stability (other) - EN 1022:2023

Test No.	Test	Loading		Result
EN 1022, 7.3.1	Forwards overturning	Vertical force, N Horizontal force, N	600 20	Passed
EN 1022, 7.3.2	Forwards overturning for seating with footrest	Vertical force, N Horizontal force, N	600 20	N/A
EN 1022, 7.3.3	Corner stability test	Vertical force, N	300	Passed
EN 1022, 7.3.4	Sideways overturning, all seating without armrests	Vertical force, N Horizontal force, N	600 20	Passed
EN 1022, 7.3.5.2	Sideways overturning, all other seating - Seating with arm rests	Vertical force seat, N Vertical force armrest, N Horizontal force, N	250 350 20	N/A
EN 1022, 7.3.5.3	Sideways overturning, all other seating - Seating with raised edges	Vertical force seat, N Vertical force armrest, N Horizontal force, N	250 350 20	N/A
EN 1022, 7.3.6	Rearwards overturning, all seating with back rests	Vertical force, N Horizontal force, N	600 154	Passed
Additional test procedures for seating with reclining back rests				
EN 1022, 7.4.2	Tilting seating	Back angle, ° Load, discs	11	N/A
EN 1022, 7.4.3	Reclining seating with leg rest	Back angle, ° Z distance, mm		N/A
EN 1022, 7.4.4	Reclining seating without leg rest	Back angle, ° Z distance, mm		N/A
EN 1022, 7.4.5	Rearwards stability test for rocking chairs	Back angle, ° Load, discs	8	N/A



4.5 Strength and durability

Test no.	Test	Test Method	Cycles	Load	Result
4.5.1.1	Seat static load and back static load test	EN 1728, 6.4	10	Seat: 2000 N Back: 600 N	Passed
Comment	The loading was reduced				
4.5.1.2	Seat front edge static load test	EN 1728, 6.5	10	Seat: 1600 N	Passed
4.5.1.3	Vertical static load on back	EN 1728, 6.6	10	Seat: 1800 N Back: 900 N	Passed
4.5.1.4.1	Foot rest static load test	EN 1728, 6.8	10		N/A
4.5.1.4.2	Leg rest static load test	EN 1728, 6.9	10		N/A
4.5.1.5	Arm rest sideways static load test	EN 1728, 6.10	10		N/A
4.5.1.6	Arm rest downwards static load test	EN 1728, 6.11	5		N/A
4.5.1.7.1	Vertical upwards static load on arm rests	EN 1728, 6.13.1	10		N/A
4.5.1.7.2	Vertical upwards static load on arm rests (Stacking seating)	EN 1728, 6.13.2			N/A
4.5.1.8	Combined seat and back durability test	EN 1728, 6.17	200000	Seat: 1000 N Back: 300 N	Passed
4.5.1.9	Seat front edge durability test	EN 1728, 6.18	80000	800 N	Passed
4.5.1.10	Seat side.to.side durability test	EN 16139, Annex B	20000		N/A
4.5.1.11	Arm rest durability test	EN 1728, 6.20	60000		N/A
4.5.1.12	Footrest durability test	EN 1728, 6.21	60000		N/A
4.5.1.13	Leg rest durability test	EN 16139, Annex C	20000		N/A
4.5.1.14	Leg forward static load test	EN 1728, 6.15	10	Edge: 620 N (Seat: 1800 N)	Passed
4.5.1.15	Legs sideways static load test	EN 1728, 6.16	10	Edge: 620 N (Seat: 1800 N)	Passed
Comment	The loading was reduced 330N.				
4.5.1.16	Seat impact test	EN 1728, 6.24	10	300 mm	Passed
4.5.1.17	Backward fall test	EN 1728, 6.28	5		Passed
4.5.1.18	Back impact test	EN 1728, 6.25	10	330 mm / 48 °	Passed
4.5.1.19	Arm rest impact test	EN 1728, 6.26	10		N/A
4.5.1.20	Drop test (multiple seating)	EN 1728, 6.27.1	2 x 5		N/A
4.5.1.21	Auxiliary writing surface static load test	EN 1728, 6.14	10		N/A
4.5.1.22	Auxiliary writing surface durability test	EN 1728, 6.22	20000		N/A

5 Documentation

Test no.	Test	Test Method	Result
5	Information for use	EN 16139, 5 clause a to g.	Not tested
Comment	Info not received (prototype)		



Annex E. Additional drop tests (informative)

Test no.	Test	Test Method	Cycles	Load	Result
E.1.1	Drop test for stacking seating	EN 1728 6.27.2	10 + 10	Height:	N/A
E.1.2	Drop test from the height of a table	EN 1728 6.27.3	5 + 5	Height:	N/A



Methods

The following standard method is used in this test report:

EN 16139:2025	Furniture - Strength, durability and safety - Requirements for non domestic seating
EN 1728:2012/AC:2013	Furniture - Seating - Test methods for the determination of strength and durability
EN 1022:2023	Furniture - Seating - Determination of stability

Measurement uncertainty:	Decision rule according to EN ISO IEC 17025:2018 clause 3.7: No account is taken of measurement uncertainty when reporting numerical results.
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Sample

Description of the item tested:

Model:	3422 Plan Wood Chair
Type:	Other seating (not lounge)
Armrests:	No
Legrest:	No
Width:	420 mm
Length:	510 mm
Height:	770 mm
Weight:	4.82 kg
Materials:	Oak, oak veneer



Photo of the sample as received:

