

Sheet No 1 - 14a/18/S  
**Strength test. FURNITURE FOR SEATING**

Name and symbol of furniture type: Quadra SHA  
Weight of furniture in N: 970  
Dimensions of furniture in mm: height: 1640, width: 1680, depth: 700

**Methodology: PN-EN 1728:2012**

**Requirements: PN-EN 16139:2013\_07 - level 2**

Stand ard point	Type of test	Test parameters	Test result
6.4	Seat and backrest static load test	Vertical force on seat 2000 N, 10 cycles Force perpendicular to backrest 700 N, 10 cycles	Positive
6.5	Front seat edge static load test	Vertical force on seat 1600 N 10 cycles	Positive
6.6	Backrest static load test with downward vertical force	Vertical force 900 N 10 cycles	Positive
6.7	Backrest static load test with forward horizontal force	Horizontal force 450 N 10 cycles	Positive
6.10	Armrest outward static load test	Horizontal force 900 N 10 cycles	Not applicable
6.11	Armrest downward static load test	Horizontal force 900 N 10 cycles	Not applicable
6.15	Front leg static load test	Force on seat 1800 N Horizontal force 620 N 10 cycles	Positive
6.16	Side leg static load test	Force on seat 1800 N Horizontal force 620 N 10 cycles	Positive

Tests carried out by: Karol Łabęda, MSc Eng. ....  
Results checked by: Rafał Westerski, MSc Eng. ....

Sheet No 2 - 14a/18/S  
Strength test. **FURNITURE FOR SEATING**

Name and symbol of furniture type: Quadra SHA

**Methodology: PN-EN 1728:2012**

**Requirements: PN-EN 16139:2013\_07 - level 2**

Stand ard point	Type of test	Test parameters	Test result
6.17	Seat and backrest fatigue test	Vertical force on seat 1000 N Force perpendicular to backrest 300 N 200,000 cycles	Positive
6.18	Front seat edge fatigue test	Vertical force on seat 800 N, 100,000 cycles	Positive
6.20	Armrest fatigue test	Force at 10° Force 400 N 60,000 cycles	Not applicable
6.24	Seat impact test	Drop height 300 mm 10 cycles	Positive
6.25	Backrest impact test	Drop height 330 mm 10 cycles	Positive
6.26	Armrest impact test	Drop height 330 mm 10 cycles	Not applicable
6.27	Free drop test	Drop height 450 mm 2 x 5 cycles	Positive
6.28	Free backward overturn test	5 cycles	Positive
6.30	Rolling resistance test	1000 cycles	Positive

Tests carried out by: Karol Łabęda, MSc Eng. ....

Results checked by: Rafał Westerski, MSc Eng. ....

Sheet No 3 - 14a/18/S  
Stability test. **FURNITURE FOR SEATING**

Name and symbol of furniture type: Quadra SHA  
Height of seat  $h_s$  in mm: 440

**Methodology and requirements: PN-EN 1022:2007**

Stand ard point	Type of test	Test parameters	Test result
6.2	Forward overbalancing, all furniture for seating	Vertical force 600 N Horizontal force 20 N 5 sec.	Positive
6.4	Sideward overbalancing, all furniture for seating without armrests	Vertical force 600 N Horizontal force 20 N 5 sec.	Positive
6.5	Sideward overbalancing, all furniture for seating with armrests	Vertical force 250 N + 350 N Horizontal force 20 N 5 sec.	Not applicable
6.6*	Backward overbalancing, all furniture for seating	Vertical force 600 N Horizontal force 160 N 5 sec.	Positive

\*(6.6) Horizontal force:  $F = (1000 - h_s) \cdot 0.2857$  [N] (rounded up to the nearest whole 10N)  
Seat height  $h_s \geq 720$  mm  $F = 80$  N

Tests carried out by: Karol Łabęda, MSc Eng. ....  
Results checked by: Rafał Westerski, MSc Eng. ....