

# TEST REPORT



Your Ref: -

Date: 21 Apr 2005

Our Ref: 54S046741/KLU

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DID: 6885 1414

Fax: 6779 3903

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## **Subject:**

Testing of Office chair submitted by Benel Singapore Pte Ltd on 16 Dec 2004 and 24 Mar 2005.

## **Tested for:**

Benel Singapore Pte Ltd  
59 Loyang Way  
Singapore 508750  
Tel: 68731118  
Fax: 65451118

Attn: Ms Esther Tay

## **Date of test:**

16 Dec 2004 – 20 Apr 2005

## **Description of sample:**

One piece of office chair as shown in photograph was received. The following descriptions were given by the client :

Model	:	E&E
Country of Origin	:	Singapore
Description	:	Midback with adjustable armrest Synchro Mechanism Hi-rise nylon base on castors Fabric – Green & Grey

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**Method of test:**

As requested by the client, the tests were conducted in accordance with the following:

ANSI/BIFMA X5.1 – 2002 "General-Purpose Office Chairs – Tests"

**Results:**

Clause	Test	Description	Assessment
5	Back strength test - Static - Type I (Tilting chair)	Duration 1 min Functional load 890N Proof load 1334N	Passed
6	Back strength test - Static - Type II & III (Fixed seat angle, tilting backrest & Fixed seat angle, fixed backrest)	Duration 1 min Functional load 667N Proof load 1112N	Passed Passed
7	Base test - Static	Loading force 11.1KN for 1 min - 2 applications	Passed
8	Drop test - Dynamic	Functional load 102kg Proof load 136kg	Passed Passed
9	Swivel test - Cyclic	Cycle 120 000 Loading load 102kg	Passed
10	Tilt mechanism test - Cyclic	Cycle 300 000 Loading load 102kg	Passed
11	Seating Durability test - Cyclic - Impact Test	Cycle 100 000 Loading 57kg	Passed
	- Front Corner Load-Ease Test - Cyclic – Off Center	Cycle 40 000 Loading 734N	Passed
12	Stability test - Dynamic a) Rear stability	Balancing weight 79kg Applied force - Type I : 89N - Type II : 89N - Type III : 156N	Passed NA Passed
	b) Front stability	Vertical Load 600N Horizontal force 20N	Passed
13	Arm strength test - Vertical - Static	Functional load 890N Proof load 1334N	Passed Passed
14	Arm strength test - horizontal - Static	Functional load 445N Proof load 667N	Passed Passed
15	Back durability test – Cyclic – Type I	Balancing weight 102kg Loading force 445N Cycle 120 000	Passed
16	Back durability test - Cyclic - Type II & III	Balancing weight 102kg Loading force 334N Cycle 120 000	Passed

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**Results (Con't)**

Clause	Test	Description	Assessment
17	a) Caster/chair base durability test - Cyclic - For pedestal Base Chairs	Balancing weight 102kg Cycle 2 000 with obstacles Cycle 98 000 without obstacles	Passed
	- For Chairs with legs	Balancing weight 102kg Cycle 2 000 with obstacles Cycle 98 000 without obstacles	NA
	b) Caster retention	Applied force 22N	Passed
18	Leg strength test - Front & side application - Front load Test	Duration 1 min Functional load 334N Proof load 556N	NA
	- Side Load Test	Duration 1 min Functional load 334N Proof load 512N	NA
19	Footrest durability test - Vertical - Cyclic	Loading force 890N Cycle 50 000	NA
20	Arm Durability Test - Cyclic	Applied force 400N Cycle 60 000	Passed
21	Out stop tests for chairs with manually adjustable seat depth	Balancing weight 70kg Loading weight 25kg Cycle 25	NA
22	Tablet Arm Static Load Test	Applied load 68kg Duration 5 min	NA
23	Tablet Arm Load Ease Test - Cyclic	Applied load 35kg Cycle 100 000	NA

NA – Not Applicable.

Acceptance level for clause 5, 6, 7, 8, 13, 14, 18, 22

- Functional load shall cause no loss of serviceability to the chair

- Proof load shall cause no sudden and major change in the structural integrity of the product. Loss of serviceability is acceptable.

Acceptance level for clause 9, 10, 11, 15, 16, 17, 19, 20, 21, 23

- Shall cause no loss of serviceability.

Acceptance level for clause 12 - Shall not tip over

  
Kelvin Lau  
Associate Engineer

  
Samuel Lew  
Engineer  
Consumer & Safety Products  
Testing Group



E&E

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June 2004