TEST REPORT

Your Ref:	D/O dated 12 May 2003	Date:	25 Aug 2003
Our Ref:	54S032353/A/KLU	Page:	1/4
DID:	6885 1414	Fax:	6779 3903

NOTE: This Report is issued subject to the "Terms and Conditions Governing Technical Services" set out in the "Request for Technical Services" form. The terms and conditions governing the issue of this report are set out overleaf.

Subject:

Testing of Office chairs submitted by Benithem Sdn Bhd on 12 May 2003.

Tested for:

Benithem Sdn Bhd
33, Jalan Industri 1,
Taman Perindustrian Pekan Nanas,
Pekan Nanas, 81500 Pontian,
Johor, Malaysia
Tel: 607 6996668
Fax: 607 6992655

Attn: Ms Joey Tong

Date of test:

13 May - 15 Aug 2003

Description of sample:

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

Brand	:	Kio (Midback Recliner Synchron V Armchair in R110 black)
Model	:	KB8020SYA
Manufacturer	:	Benithem Sdn Bhd
Country of Origin	:	Malaysia
Description	:	Injection Moulded Foam For Seat And Back Polypropylene Armrest Synchron with locking device Sleek designed nylon chair base Imported class 3 gaslift Heavy duty twin wheel castors

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:

ANSI/BIFMA X5.1 - 2002

Clause	Test	Description	Assessment
5	Back strength test - Static - Type I (Tilting chair)	Duration 1 min Functional load 890N Proof load 1334N	 NA NA
6	Back strength test - Static - Type II & III (Fixed seat angle, tikting backrest & Fixed seat angle, fixed backrest)	Duration 1 min Functional load 667N Proof load 1112N	 Passed Passed
7	Base test - Static	1) Loading force 11.1KN for 1 min 2) Loading force 11.1KN for 1 min	Failed* -
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	NA
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	 NA Passed NA
	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	 NA

*Base broke at 10.4KN

Results (Con't):

Clause	Test	Test parameters	Assessment
16	Back durability test - Cyclic - Type II & III	Balancing weight 102kg Loading force 334N Cycle 120 000	Passed
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

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

Goh-Chow Chew Peng (Mrs)
Product Manager
Consumer & Safety Products
Testing Group

Kio KB8020SYA