TM NO.: C300
REVISION: C
DATE: 9/15/03
REVIEWED BY: SUSAN GOLDSMITH
DIRECTOR OF TECHNICAL SERVICES

Method Used for the Evaluation of Relative Levels of Particle Shedding from Clean Room Chairs as a Function of Time and Compression

1. Scope
This test method evaluates relative levels of shedding from chairs during both static and compression conditions.

2. Summary of Method

Test chairs are cleaned with aerosol spray and clean wipes before testing to remove loose surface debris. Each test chair is then enveloped in a sealed and clean plastic film. High purity filtered air is then flowed through the envelope. This flow and backpressure keep the envelope under positive pressure. The film above the test chair seat is held against the seat by a light weight, to minimize film movement during seat compressions. Air directly below the test seat chair is samples for both particle number and size range. Particle counts and sizing are done with an automatic particle counter which is sampling at 1 scfm.

3. Interferences
    3.1.1. The following factors may interfere with the test and must therefore be avoided:
    3.1.2. Electrical noise can affect automatic particle counters. The counter must be connected to an isolated power outlet
    3.1.3. Electrical background counts must be determined for each particle counter- see IBR SOP
    3.1.4. Air temperature should be normal room temperature- 20C
    3.1.5. Fittings must be pre-cleaned plastic or stainless steel
    3.1.6. Humidity should be kept under 50% to prevent formation of water condensation which will cause false particle counts.
    3.1.7. Humidity should be kept above 30% to prevent static buildup and particle attraction to the charged surface.

4. Apparatus
  4.1. See Figure 1. The basic system consists of the following:
    4.1.1. Pump capable of 70 scfh
    4.1.2. Flowmeter- able to read the flow with accuracy of +/-5%
    4.1.3. Filter series for providing the ULPA inlet air

4.1.4. Humidity sensor

5. Reagents and Instrumentation

5.1. ULPA Filtered air

5.2. Automatic Particle Counter

5.3. Test room, approx 10' x 10' x 8'

5.4. Humidity and temperature control

5.5. Test Envelope, made from clean film

6. Steady Flow (Static) Procedure:

6.1. Install the test chair into a fresh, clean film enclosure.

6.2. Connect apparatus to the automatic particle counter

6.3. Turn the incoming air flow on, and adjust floe through the enclosure to the desired rate, to keep a stable positive pressure when the counter is pulling 1 scfm.

6.4. Set up the calibrated particle counter per the manufacturer's instructions.

6.5. Record counts for 30 minutes, from 2" below the seat bottom.

7. Compression Procedure

7.1. Compress the seat by sitting on it (or for seat backs, leaning against it) for approximately 15 seconds once every 5 minutes.

7.2. Record particle counts using the particle counter. The counter should collect data continuously. It should accumulate counts for 5 minutes, then reset and accumulate for the next 5 minutes.

7.3. The test is complete after 30 minutes

8. Final Steady Flow (Static) Procedure

8.1. Repeat section 7.

9. Calculation of Results

9.1. Determine the particle concentration in counts per cubic foot.

10. Report

10.1. Full chair description, including PN, as available

10.2. Test Data

10.3. Cleanliness class, based on the particles/ft3 in the specified ranges

![INTERBASIC RESOURCES INC. IBR]

TEST REPORT

Performed for: ergoCentric   Location: Mississauga, ON   Contact :Nancy Alamada
IBR JN:8837
Date: 9 January, 2007

Test Method: Clean Room Chair Particulate Cleanliness per IBR TM C300 rev C
Instrumentation: PMS 110 s/n 31709-1193-53/12 Next cal 8/2007
Temperature: Ambient
Description of Sample: Cleanroom Chair GEO-MB-MT, Geocentric High Multitilt s/n 341815
          GF20110 (2yd) #393 Vinyl- Black CRPACK
Date Samples Received: 6 December, 2006   Sample Source: ergoCentric

Condition	Time mins	Particles/5ft3 at:(in microns)					
		0.1-0.15	0.15-0.2	0.2-0.25	0.25-0.3	0.3-0.5	>0.5
Steady	5	0	0	0	0	0	0
	10	0	0	0	0	0	0
	15	0	0	0	0	0	0
	20	0	0	0	0	0	0
	25	0	0	0	0	0	0
	30	0	0	0	0	0	0
Compression	5	33	14	8	5	0	0
	10	26	13	5	1	0	0
	15	26	11	2	1	0	0
	20	24	10	4	0	0	0
	25	23	9	5	0	0	0
	30	22	10	2	0	0	0
Steady	5	9	2	1	0	0	0
	10	5	1	1	0	0	0
	15	2	0	0	0	0	0
	20	1	0	0	0	0	0
	25	0	0	0	0	0	0
	30	0	0	0	0	0	0

Data Summary- Fed Std 209				Data Summary- ISO 14644				
	Total counts /ft3 at:				Total counts /m3 at:			
	0.1-0.5	>0.5	Class		0.1-0.2	0.2-0.3	0.3-0.5	Class
Precompression	0	0	1	Precompression	0	0	0	1
Compression	8	0	1	Compression	260	20	0	3

Notice: These data relate only to the samples tested. This report may be copied only in its entirety.
pg 1/3   Performed By: DW   Data Location:DW166

Reviewed By: _____
          Susan H. Goldsmith, Director of Technical Services
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INTERBASIC RESOURCES INC.///////////////////////

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TEST REPORT

Performed for: ergoCentric   Location: Mississauga, ON   Contact :Nancy Alamada
IBR JN:8837
Date: 9 January, 2007

Test Method: Clean Room Chair Particulate Cleanliness per IBR TM C300 rev C
Instrumentation: PMS 110 s/n 31709-1193-53/12 Next cal 8/2007
Temperature: Ambient
Description of Sample: Cleanroom Chair Ergo F Standard, small seat s/n 341813
          GF20110 (1 yd) #393 vinyl- black
Date Samples Received: 6 December, 2006   Sample Source: ergoCentric

Condition	Time mins	Particles/5ft3 at:(in microns)					
		0.1-0.15	0.15-0.2	0.2-0.25	0.25-0.3	0.3-0.5	>0.5
Steady	5	0	0	0	0	0	0
	10	0	0	0	0	0	0
	15	0	0	0	0	0	0
	20	0	0	0	0	0	0
	25	0	0	0	0	0	0
	30	0	0	0	0	0	0
Compression	5	44	26	11	4	1	0
	10	41	22	9	2	2	0
	15	38	21	8	4	0	0
	20	30	20	5	1	1	0
	25	32	16	5	1	0	0
	30	36	19	4	1	0	0
Steady	5	18	8	5	0	0	0
	10	6	5	1	0	0	0
	15	5	2	1	0	0	0
	20	2	0	0	0	0	0
	25	1	0	0	0	0	0
	30	0	0	0	0	0	0

Data Summary- Fed Std 209				Data Summary- ISO 14644				
	Total counts /ft3 at:				Total counts /m3 at:			
	0.1-0.5	>0.5	Class		0.1-0.2	0.2-0.3	0.3-0.5	Class
Precompression	0	0	1	Precompression	0	0	0	1
Compression	13	0	1	Compression	406	65	0	3

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INTERBASIC RESOURCES INC.///////////////////////

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TEST REPORT

Performed for: ergoCentric   Location: Mississauga, ON   Contact :Nancy Alamada
IBR JN:8837
Date: 9 January, 2007

Test Method: Clean Room Chair Particulate Cleanliness per IBR TM C300 rev C
Instrumentation: PMS 110 s/n 31709-1193-53/12 Next cal 8/2007
Temperature: Ambient
Description of Sample: Cleanroom Chair, Ergo 2F 200 tilt s/n 341814
              GF20110 (1 yd) #393 vinyl black
Date Samples Received: 6 December, 2006   Sample Source: ergoCentric

Condition	Time mins	Particles/5ft3 at:(in microns)					
		0.1-0.15	0.15-0.2	0.2-0.25	0.25-0.3	0.3-0.5	>0.5
Steady	5	0	0	0	0	0	0
	10	0	0	0	0	0	0
	15	0	0	0	0	0	0
	20	0	0	0	0	0	0
	25	0	0	0	0	0	0
	30	0	0	0	0	0	0
Compression	5	39	26	11	5	0	0
	10	35	20	10	2	0	0
	15	33	21	8	1	0	0
	20	30	18	5	1	0	0
	25	33	16	2	0	0	0
	30	30	19	1	0	0	0
Steady	5	16	11	0	0	0	0
	10	7	4	1	0	0	0
	15	2	2	0	0	0	0
	20	1	1	0	0	0	0
	25	0	0	0	0	0	0
	30	0	0	0	0	0	0

Data Summary- Fed Std 209				Data Summary- ISO 14644				
	Total counts /ft3 at:				Total counts /m3 at:			
	0.1-0.5	>0.5	Class		0.1-0.2	0.2-0.3	0.3-0.5	Class
Precompression	0	0	1	Precompression	0	0	0	1
Compression	12	0	1	Compression	377	54	0	3

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