

Date

June 28, 2016

Customer

Work Station Industries

RE: Product test of cleanroom chair

The information below outlines the testing that was carried out on the listed equipment and the corresponding results.

Cleanroom Chair

Manufacturer – Comfort Seating Plus

Model – REG. NO. CA-44371

Materials utilized

- Cleanroom chair
- 24" x 24" epoxy coated aluminum panel
- Climet CI-150 Particle counter and sample probe
- Tri-pod
- 2 operators

Testing Procedure

- The chair was thoroughly cleaned with 70% IPA and a lint free cloth.
- The chair was placed into an ISO 7 cleanroom.
- The room was allowed to purge for a period of 30 minutes after introduction of the equipment.
- One fully gowned individual was present to carry out the testing, while all equipment and an additional operator were stationed outside of the clean space.
- The sample probe was positioned at a distance of 1" away from the perforated discharges at the bottom and back of the chair.
- Five 1-minute (1 CFM) samples were taken at the Port #1 position below the chair seat to show pre-test room conditions.
- Following the establishment of room conditions, samples were taken at each of the 3 discharge points.
- A 1 minute (1 CFM) sample was taken 1" away from the discharge with the probe facing into the discharge air stream.
- The epoxy panel was placed onto the chair cushion and compressions were carried out using approximately 175 lbs. at 15, 30, and 45 seconds during the 1-minute sample.

- This action was carried out for all three of the of the discharge ports.
- Upon completion of the testing, five 1-minute (1 CFM) samples were taken to show post-test room conditions.

Test Results

<u>Pre-test</u>	<u>0.5μ</u>	<u>5.0μ</u>
Sample #1	10	0
Sample #2	2	0
Sample #3	6	0
Sample #4	4	0
Sample #5	1	0
<u>Port #1 Left bottom of chair</u>	<u>0.5μ</u>	<u>5.0μ</u>
Sample #1	239	16
<u>Port #2 Right bottom of chair</u>	<u>0.5μ</u>	<u>5.0μ</u>
Sample #1	107	3
<u>Port #3 Back of chair</u>	<u>0.5μ</u>	<u>5.0μ</u>
Sample #1	81	3
<u>Post-test</u>	<u>0.5μ</u>	<u>5.0μ</u>
Sample #1	8	0
Sample #2	2	0
Sample #3	2	0
Sample #4	2	0
Sample #5	0	0

The above testing was carried out in an attempt to measure the potential particle discharge of the listed product only. Controls were demonstrated both pre-test and post-test. The product was tested while compressing the cushions at a rate of 3 compressions in a one-minute period. The results show that the chair is not a significant particle generator. Utilization of this product in a cleanroom environment should be considered only after performing a full assessment of the product, its construction materials, and performance in regards to its integration into any specific environment.

Test Date – 6-28-2016

Equipment – Climet CI-150 ID #S14PCA

Personnel – Micah Hunter, Wayne Copeland

Location – CEPA Operations Inc. Training Center cleanroom