



TEST REPORT

Project 020317-1A

Particle Testing of Reusable Shoe Covers

Prepared For:

Tammie Hamilton
Pro Shoe Covers

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Request

Helmke Drum particle testing of reusable shoe covers

Sample Description

Reusable black shoe covers with fabric upper and PVC sole, area = 5.17 square feet/pair
Six pairs, Size Medium, cleanroom laundered and packaged

Test Method

Particle testing was performed per IEST-RP-CC003.4, Appendix B, Section B.2.5. One pair of shoe covers was placed in the Helmke Drum and tumbled for ten minutes. Particles emitted from the shoe covers were enumerated using a Met-One Model A2400 Laser Particle Counter at a flow rate of 1 cfm. The average number of particles >0.3um, >0.5um, >1.0um and >5.0um emitted per minute per square foot is reported. Results are corrected for the method blank and have been compared to the IEST cleanliness specifications. Testing was repeated for two additional pairs of shoe covers.

Test Results

Particles/minute/square foot

	<u>Pair #1</u>	<u>Category</u>	<u>Pair #2</u>	<u>Category</u>	<u>Pair #3</u>	<u>Category</u>
Particles >0.3um	426	III	303	II	112	II
Particles >0.5um	57	II	48	II	20	I
Particles >1.0um	7.1	N/A	13	N/A	6.0	N/A
Particles >5.0um	0.7	N/A	3.8	N/A	0.8	N/A

Discussion

The IEST particle limits, converted to a per square foot basis, are given below:

<u>Category</u>	<u>Particles >0.3um</u>	<u>Particles >0.5um</u>
I	<34.1	<20.1
II	34.1 – 341	20.1 - 201
III	341 – 3414	201 - 2008

At the >0.3um particle size range, two pairs of shoe covers were classified as Category II and one pair was classified as Category III. At the >0.5um particle size, one pair of shoe covers was classified as category I and two pairs were classified as Category II. There are no IEST limits for particles >1.0um and >5.0um.



Reference

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