

Request

Testing of aprons and glove/sleeves for particle cleanliness

Sample Description

- a) P/N 42530 4 blue translucent polymer aprons, size XL
- b) P/N 43450 4 blue translucent polymer gloves with sleeves, 23 inch length

Test Method

Two aprons and two gloves were tested individually for particle cleanliness in accordance with IEST-RP-CC003.2 (Helmke Drum method). A Met-One 3313 Airborne Particle Counter was used to enumerate particles $> 0.5\mu\text{m}$ released from the garments during tumbling. Test results are reported as particles per minute and are corrected for the method blank. Two aprons and two gloves were preconditioned at $70^{\circ}\text{F} \pm 2^{\circ}$ and $50\text{ RH} \pm 2\%$ for 24 hours. The items were then tested for surface resistivity using a 3M Model 701 Megohmmeter with two 5-pound test weights. Results are reported as Ohms per square.

Results

Sample #	Particles $> 0.5\mu\text{m}/\text{minute}$	Surface Resistivity, Ohms/square
Apron 1	153	10^{10}
Apron 2	89	10^{10}
Glove 1	746	10^{10}
Glove 2	415	10^{10}

Discussion

Using the Helmke Classification Chart in IEST-RP-CC003.2 and comparison to similar products, the aprons would be classified as Cleanliness Level I (frocks @ < 1000 particles). The gloves would be classified as Cleanliness Level II (1 hood @ 150 to 1500 particles). Both products had surface resistivity readings in the anti-static range.

Reference

Project MC1460

Report Issued By/Date: Larry Ranta 12-4-2001 (electronic approval)