



Dear valued customer,

This letter informs you that ULTITEC 2000 coverall is suitable for ISO Class 6 and above cleanrooms.

For a wide range of industries, processes must be kept clean and uncontaminated. ULTITEC 2000 coverall provides a garment for these controlled environments with different levels of comfort, durability, breathability, and protection in a variety of styles. The Helmke Drum test IEST-RP-CC0033.3 is used to simulate particle shedding of clothing under movement. Base on the test result, ULTITEC 2000 coverall achieves ISO Class 6 and above in the Helmke Drum test:

ISO 14644-1 Cleanroom Standard						
ISO Class / Particle Size	>0.1 µm	>0.2 µm	>0.3 µm	>0.5 µm	>1 µm	>5 µm
ISO Class 1	10	2				
ISO Class 2	100	24	10	4		
ISO Class 3	1,000	237	102	35	8	
ISO Class 4	10,000	2,370	1,020	352	83	
ISO Class 5	100,000	23,700	10,200	3,520	832	29
ISO Class 6	1,000,000	237,000	102,000	35,200	8,320	293
ISO Class 7				352,000	83,200	2,930
ISO Class 8				3,520,000	832,000	29,300
ISO Class 9				35,200,000	8,320,000	293,000
ULTITEC 2000				351.8	778.3	149.8


Cleanrooms are classified according to the number and size of particles permitted per volume of air. Both FED-STD 209E and ISO 14644-1 assume log-log relationships between particle size and particle concentration. Here is ULTITEC 2000 coverall suitability by cleanroom class between ISO 14644-1 and US FED-STD 209E.

ISO 14644-1 Class	1	2	3	4	5	6	7	8	9
US FED-STD 209E	--	--	1	10	100	1,000	10,000	100,000	--
ULTITEC 2000 coverall	--	--	--	--	--	V	V	V	V

ULTITEC 2000 coverall also has been subjected to various tests relevant to cleanroom clothing performance. Including EN13982-2 inward leakage of particulates, and EN 1149-1 antistatic performance. With these information and all test results, we present the ULTITEC 2000 coverall, suitability on the cleanroom condition.

Yours sincerely,

DEREKDUCK INDUSTRIES CORP


JASON LIN

