INDIAN INSTITUTE OF TECHNOLOGY BOMBAY

MATERIALS MANAGEMENT DIVISION

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Detailed Technical Specifications for Premium Allergen and Home Pollutants Air Filter

1. Premium Allergen & Home Pollutants Air Filter

Overall Length (Imperial) : 25 in
 Overall Thickness (Imperial) : 1 in
 Overall Width (Imperial) : 20 in

4. Package Contents : 1 Pack (1 Qty.)
5. Filter media size : 18 in x 23 in

6. Testing : ASHRAE(American Society of Heating, Refrigerating

and Air-Conditioning Engineers) 52.2

7. Cardboard frame : 1 in x 1 in x 1 in

8. Construction : Pleated polyolefin filter media surrounded by a cardboard frame and supported by polyolefin strands on one side. The finished product should contain 42 pleats per foot.

9. HVAC filters

10. Electrostatic charged filter media with a significant microscopic bipolar charge on the fibers with charging density between 70-120 mC/m²

11. The thickness of filter media : 0.7-0.75 mm 12. Effective fiber diameter : 17-17.5 mm

13. Pressure drop at filter media

For 14 cm/s (mm H₂O) : 1.2-1.3 14. Solidity (1- porosity) : 0.090-0.095

15. Captures : Lint, Household Dust, Dust Mite Debris, Mold Spores, Pollen, Pet Dander, Smoke, Smog, Cough & Sneeze particles, Bacteria, Virus, Candle Soot, PM 2.5 & Exhaust Particles

16. These filters will be used for Medium Scale Air Cleaning System in Delhi

Filter Performance: Filter flowrate and pressure drop for 20 in x 25 in x1 in (range)

515	770	1025	1280	1735	Airflow Rate (CFM)
			0.27-	0.41-	Initial Resistance
0.06-0.08	0.12-0.14	0.18-0.20	0.29	0.43	(inches H2O)

Filter Efficiency (%)

e1	e2	e3
>65	90	>95

2. Flat Panel Air Filter

Overall Length (Imperial) : 25 in
 Overall Thickness (Imperial) : 1 in
 Overall Width (Imperial) : 20 in

4. Package Contents
5. Filter media size
6. Cardboard frame
1 Pack (2 Qty.)
18 in x 23 in
1 in x 1 in x 1 in

7. Testing used : ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers) 52.2

8. Construction : Non-electrostatic / electrostatic filter media surrounded by a cardboard frame.

9. Filter media captures : Lint, Household Dust, PM 10

10. Filter efficiency : \sim 20% efficiency for average particle size for 3.0 – 10.0 mm

11. These filters will be used for Medium Scale Air Cleaning System in Delhi

Note: Vendor must be able to deliver 5000 Qty of each filter (Flat panel air filter and filterete premium allergen) in 2 locations in Delhi:

- 1. Smog Tower, Baba Kharak Singh Rd, near Delhi Traffic Police Training Park and Gurudwara Bangla Sahib, Hanuman Road Area, Connaught Place, New Delhi, Delhi 110001, India.
- 2. Smog Tower, Anand Vihar Metro Station Gate No 3, NEW DELHI, DELHI 110092, India.