

N-Se Fresh Fabric

Removal of Pathogens, VOCs and Radon

DESCRIPTION

Axena Technologies, with Brown University (Providence, USA), has developed a novel revolutionary decontamination filtration technology that can lead to improved indoor air quality (IAQ). The application of this technology in HVAC products is very efficient for the removal of pathogens, volatile organic compounds (VOCs) and radon contaminants.

Normal air filtration systems are at risk for air pathogens growth and are unable to remove VOCs and radon contaminants. These pathogenic microorganisms grow and gain strength on filters and system surfaces, ultimately becoming air-borne and adversely affecting human health and well-being. Killing pathogenic microorganisms, removing VOCs and radon contaminants lead to cleaner indoor air and improved human quality-of-life.

FEATURES

N-Se Fresh Fabric has several properties, which explain their superior performance in a wide range of applications:

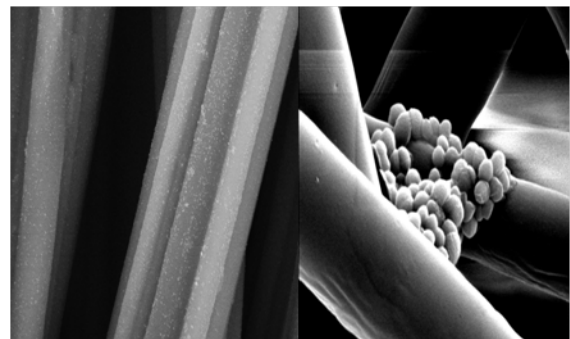
- **Proven removal of pathogen:** Tests conducted by Nanomedicine Laboratory at Brown University have shown 99.9% of killing efficacy of air pathogens.
- **Increased surface area:** The material is designed with large surface area to enhance filtration performance.
- **Flexible material:** The material's flexibility offers superior handling in filter and product manufacture and

makes lamination or bonding to other materials possible.

- **Enhanced adsorption:** The material exhibits high rapid reaction and adsorption kinetics. Therefore, N-Se Fresh Fabric filters are very effective when short contact time, high air flow speeds or small bed depths are required.
- **Resilient in humid environments:** N-Se Fresh Fabric's structure is designed to perform in high humid environments up to 100% relative humidity.



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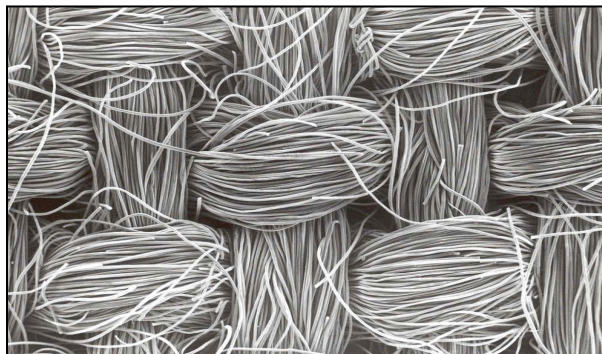


Nano Selenium particles on N-Se Fresh Fabric (left) eliminates microbial growth common in other fabrics (right)

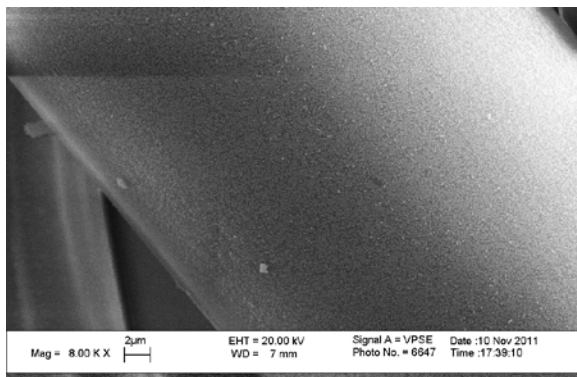
PROPERTIES

| NOMINAL PROPERTIES | FM 10 | FM 70 | FM 100 |
|--|-------|-------|--------|
| Thickness (mm) | 0.5 | 0.6 | 1.0 |
| Tensile Strength Warp (N) | 15 | 15 | 25 |
| Surface Density (g/m ²) | 120 | 160 | 240 |
| Air Permeability (cm ³ /cm ² /sec at 10 mm w.g.) | 100 | 70 | 60 |

| CONSTRUCTION | |
|---------------------|------------------|
| Construction FM 10 | 1/1 plain weave |
| Construction FM 70 | Compound weave |
| Construction FM 100 | 1/1 double weave |



*N-Se Fresh Fabric in woven form
(Magnification 40 X)*

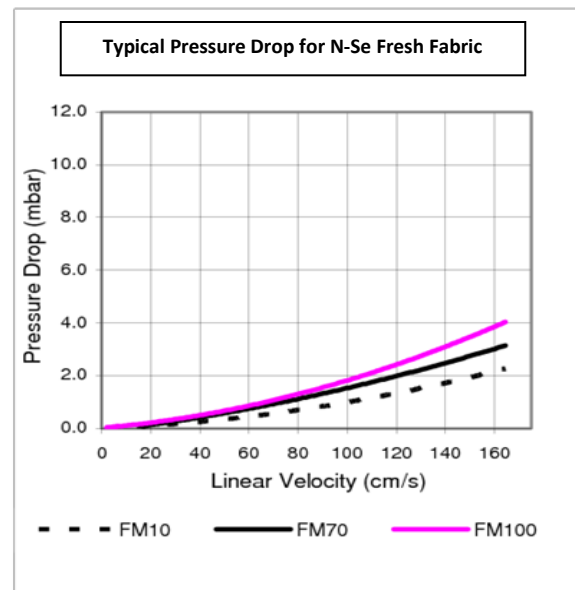


Complete Coating of Nano Selenium clusters for removal of pathogens

APPLICATIONS

- Protection of artifacts from tarnish and degradation
- Water and air purification
- Filters for Heating, Ventilation and Air Condition (HVAC) application

DESIGN INFORMATION



PACKAGING

Customized packaging according to fabric size with Polythene and bubble wrap.