

Metalmark Unveils Groundbreaking Sierra™ Air Filter: The World's First MERV 13 Wildfire Smoke Filter for HVAC Systems

The Sierra™ Filter stands out as the only MERV 13 filter scientifically tested and proven for highly effective wildfire smoke removal.

CAMBRIDGE, MA, UNITED STATES, August 6, 2024 /EINPresswire.com/ -- Wildfire smoke particles are roughly 300 times smaller than a strand of hair, and 10x smaller than even particulate matter 2.5 (PM2.5). This means these tiny invaders pose substantial health risks, easily infiltrating buildings in higher quantities than larger particles like pollen and dust. With the many health problems associated with smoke, safeguarding indoor air quality is more important than ever. But how?



[Metalmark](#), a leading innovator in air filtration technology, is pleased to announce the launch of its revolutionary Sierra™ Smoke Safe Filters set to transform the commercial air filtration industry. With its cutting-edge materials, the Sierra™ Filter stands out as the only MERV 13 filter scientifically tested and proven for highly effective wildfire smoke removal. Its unparalleled efficiency makes it the top choice for safeguarding health during wildfire seasons.

During wildfire smoke events, the general advice is to reduce HVAC ventilation and upgrade filters to MERV 13. Still, it turns out that the majority of smoke particles escape removal by typical MERV 13 filters. A scientifically [peer-reviewed paper](#) by Metalmark scientists reveals the gaps in HVAC filter media technology and standard testing methods for smoke filtration.

The Sierra™ Filter's filtration efficiency was evaluated using pine needle smoke, which is comparable to wildfire smoke and a common analyte used by U.S. EPA scientists. It was

independently tested at a third-party lab with pine needle smoke for an extended duration under commercial HVAC flow rates (2000 CFM equivalent). While the Sierra™ Filter demonstrated over 60% efficiency in filtering smoke particles, both Metalmark's internal studies and third-party testing show that commercially available HVAC filter media have much lower-than-expected filtration efficiencies or lose their effectiveness within a matter of hours.

In addition to being enhanced for smoke filtration, the Sierra™ Air Filter has undergone rigorous testing per ASHRAE standard 52.2 and is rated a MERV 13 filter for general use. It is now available for pre-order for \$59.99 through Metalmark's website.



-Key benefits of the Metalmark Sierra™ Air Filter include:

-5x More Effective Smoke Protection: Removes wildfire smoke up to 5X better than typical MERV 13 HVAC filters.



"We are thrilled to introduce the Sierra™ Smoke Free Air Filter, a game-changer in commercial air filtration, providing exceptional indoor air quality without compromising HVAC equipment/energy use"

Sissi Liu, CEO of Metalmark

-Simple Solution: A drop-in replacement for existing HVAC filters that maintains airflow and pressure.

-Scientifically Proven: Tested and rated as a MERV 13 general-purpose filter for commercial HVAC systems (24" x 24" x 2" filter at 2000 CFM airflow rate). The only filter tested and proven for highly effective wildfire smoke removal.

-Long-Lasting Performance: The filter's bio-inspired

materials and robust construction enable it to outperform other filters for longer periods, reducing maintenance costs and downtime.

-Versatile Application: Designed for commercial use, the Sierra™ Air Filter is suitable for a wide range of settings, such as educational institutions, healthcare facilities, offices, hotels, and

restaurants.

The Sierra™ Air Filter combines advanced materials and state-of-the-art filtration technology to deliver superior air filtration performance beyond just wildfire smoke. Deceptively simple, it is a direct replacement of HVAC filters of similar dimensions without causing airflow, pressure, or energy penalties. The Sierra™ Filter effectively captures smoke particles, along with other airborne contaminants such as dust and pollen.

"We are thrilled to introduce the Sierra™ Smoke Free Air Filter, a game-changer in commercial air filtration," said Sissi Liu, CEO of Metalmark. "Our team has worked tirelessly to develop a solution that provides exceptional indoor air quality without compromising HVAC equipment or energy use. With the Sierra™ Filter, schools and businesses can prioritize the health and well-being of their students and employees in the face of escalating climate threats like wildfire smoke."

Along with the Sierra™ Air Filter, Metalmark also developed the Tatama™ Air Cleaner, the world's first self-renewing air cleaner, designed for commercial buildings to remove harmful airborne particulates, smoke, and pathogens*. Tatama™ is a system for commercial building retrofits and new-build integrations. Owing to its patented self-renewing technology, it offers a low cost of ownership, maintenance, and waste generation while providing cleaner indoor air with a number of potential health and economic benefits, such as reduced absenteeism and HVAC energy use. Metalmark is a winner of the U.S. EPA's Cleaner Indoor during Wildfires Challenge.

* Third-party independently tested with MS2 and Staphylococcus

About Metalmark

Metalmark, is a small-business spinoff of Harvard University, working on answers to growing global air quality problems while addressing climate adaptation and mitigation challenges. First inspired by the nanostructures of the metalmark butterfly's wings, Metalmark Innovations, PBC, creates sustainable products from the nanoscale up for dealing with climate, sustainability, and health challenges. Metalmark developed Tatama™, the self-renewing air cleaning solution that brings freshened air to classrooms, healthcare facilities, offices, and more while requiring far less maintenance than other commercial air cleaners, along with the benefits of lower energy use and cost. For more information, visit <https://metalmark.xyz>

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