

ALKEGEN

Understanding the Threat of

WILDFIRE SMOKE





THE HIDDEN DANGERS OF WILDFIRE SMOKE

Wildfires are not just destructive due to the flames—they release a hazardous mix of gases and fine particulate matter (PM2.5) that pose serious health risks. When exposed to wildfire smoke, fine particles penetrate deep into the lungs, causing inflammation and exacerbating respiratory conditions like asthma and bronchitis. Beyond the lungs, these particles can enter the bloodstream, leading to cardiovascular issues, including heart attacks and strokes.

Wildfire smoke also contains toxic gases, such as Polycyclic Aromatic Hydrocarbons (PAHs), Volatile Organic Compounds (VOCs), and Carbon Monoxide (CO). These gases reduce oxygen delivery to vital organs, putting a strain on the heart and increasing the risk of long-term conditions, including lung cancer and chronic respiratory diseases.



INCREASING FREQUENCY AND IMPACT

As wildfires continue to increase in frequency, the danger grows. In the U.S., the number of burned forest acres has doubled in the last five years, with Europe seeing earlier and more intense wildfire seasons. These conditions are putting millions of people at greater risk of long-term health impacts.

THE IMPORTANCE OF ADVANCED FILTRATION

Why You Need Wildfire Filter Media

While staying indoors during a wildfire can reduce exposure, it doesn't completely protect you. Fine particles from wildfire smoke can infiltrate buildings through cracks, windows, and doors. Proper indoor air filtration is critical to ensuring the air you breathe is clean and safe. According to the Centers for Disease Control and

Prevention (CDC), HVAC systems in commercial buildings should use filters with a Minimum Efficiency Reporting Value (MERV 13 or higher) to effectively trap fine particles and harmful gases. Without proper filtration, even indoor air can harbor dangerous contaminants, including VOCs and PM2.5.

Wildfire Smoke vs. Other Smoke

Unlike smoke from burning wood or tobacco, wildfire smoke contains a complex mixture of gases and particles that pose unique threats. PM2.5 particles from wildfires can travel deeper into the lungs and bloodstream than those from other types of smoke, making them especially harmful

Sulphur Dioxide

Ozone

Carbon Monoxide

Nitrogen Dioxide

VOCs

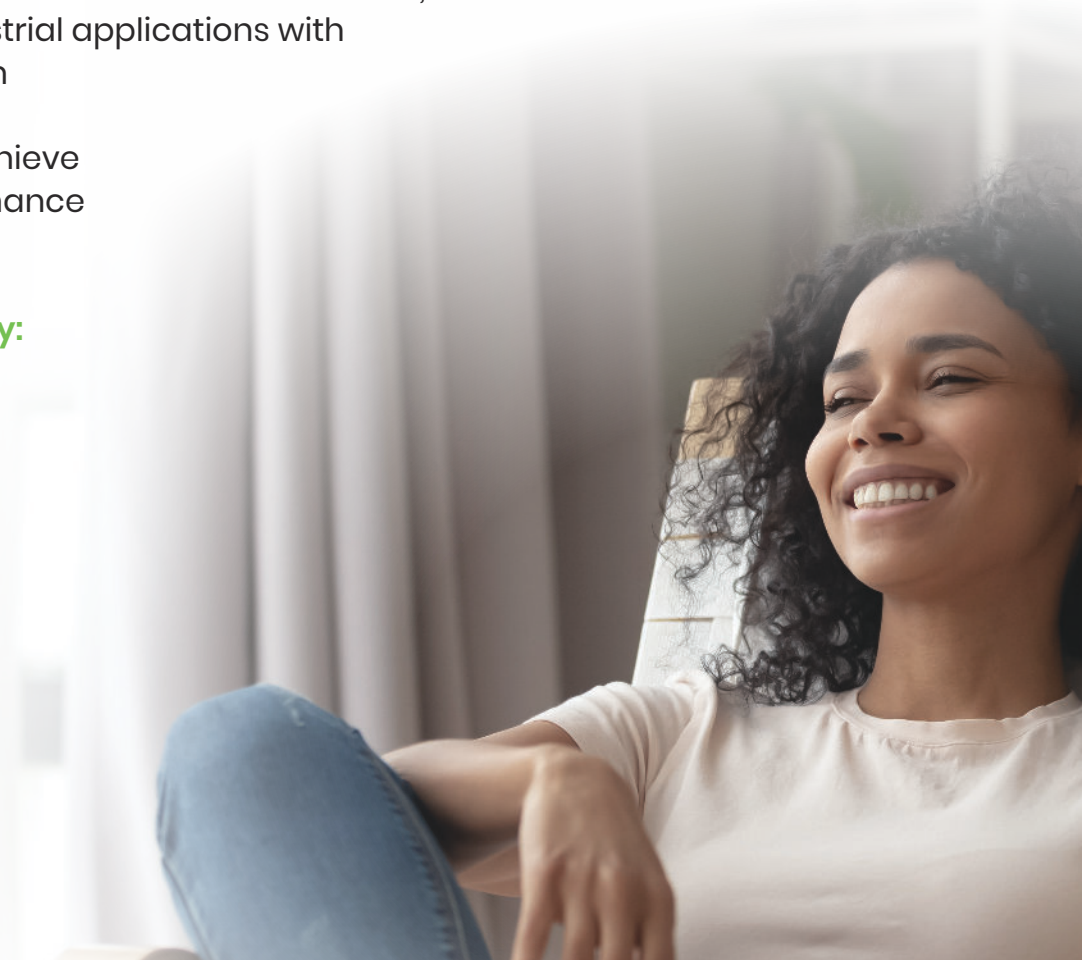
ALKEGEN: YOUR SOLUTION FOR CLEAN AIR

At Alkegen, we've designed high-performance filtration media to specifically target the dangerous pollutants in wildfire smoke. With expert engineering, our filters excel at capturing fine particulate matter (PM2.5), VOCs, CO, and other toxic substances.

Our innovative LydAir GP filtration media is engineered for maximum efficiency. This advanced filter media combines gas sorbents with particulate filtration to offer superior protection for indoor air, whether in homes, hospitals, office buildings, or data centers.

Key Features of LydAir GP:

- **Captures and Neutralizes:** Traps harmful gases and PM2.5 particles
- **Reduced Pressure Drop:** Benefit from a **15–30%** lower pressure drop at equivalent basis weight
- **Optimized for HVAC systems:** Ideal for residential, commercial, and industrial applications with increased filter lifespan
- **Superior Efficiency:** Achieve **20–30%** higher performance per gram of media
- **Exceptional Pleatability:** Designed for ease of use in manufacturing processes
- **Optimal Distribution:** Ensures a well-distributed sorbent on nonwoven materials



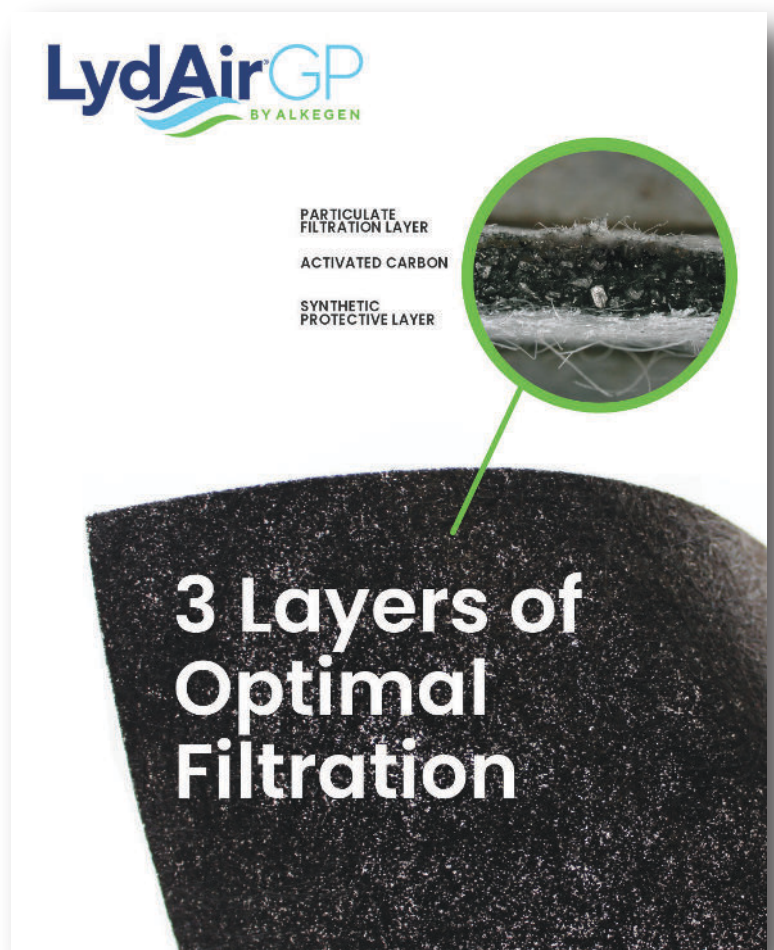
PRODUCT OFFERING

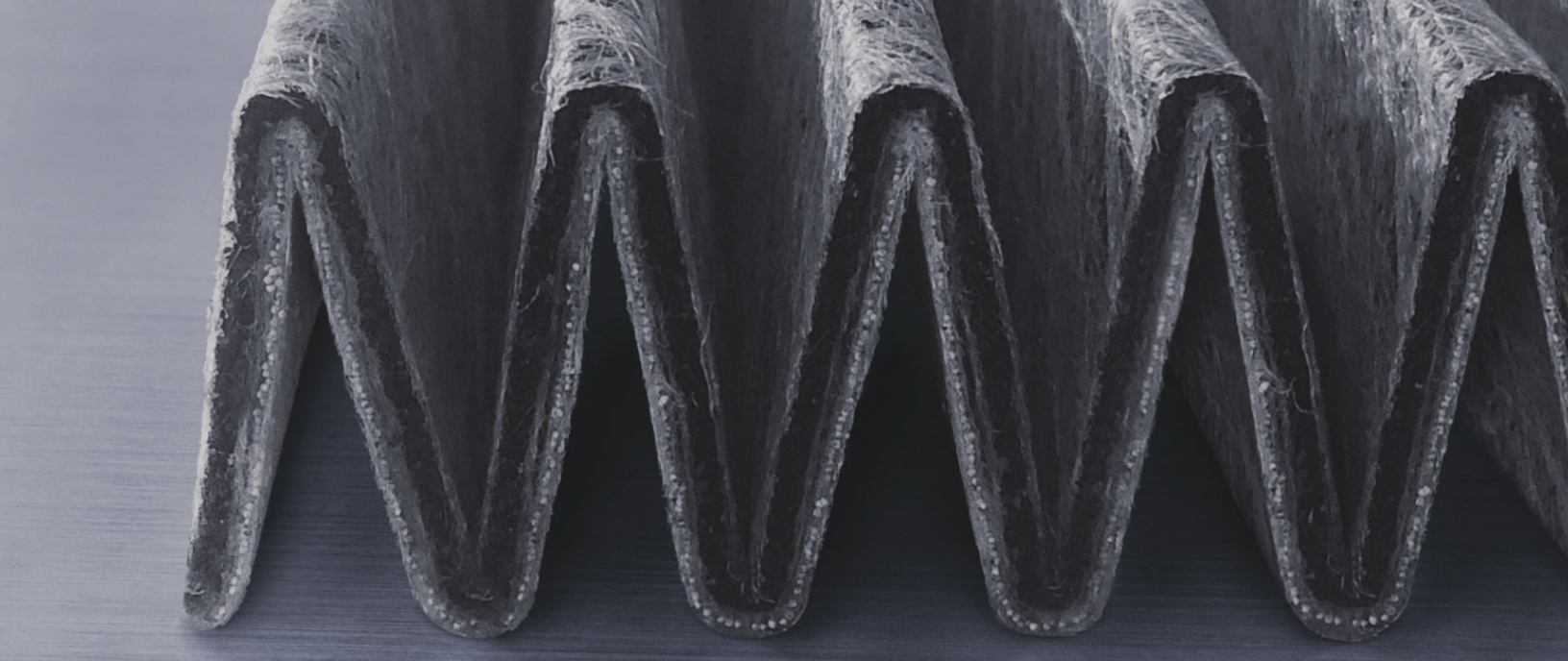
Target Gases	Grades	Carbon Weight g/m ²	Total Basis Weights g/m ²	Particulate Filtration	Comment
VOC, Acids, NO _x , Ozone	GP0200C1 -10/T13	200	358	Merv 13 (ePM10 50%)	All grades can be available without/with particulate filtration Merv 8-Merv 16; ePM10-ePM1 50-80% efficiency
	GP0200C1 -10/6	200	310	-	

THE TECHNOLOGY BEHIND ALKEGEN'S FILTER MEDIA

Advanced Composite Engineering

Our LydAir GP filter media combines synthetic non-woven materials with advanced activated carbon and a meltblown layer to form a highly efficient three-layer structure. This composite design excels in filtering out harmful particulate matter and neutralizing toxic gases from wildfire smoke.





- **Advanced Composite Engineering:**

Our filters feature state-of-the-art composite engineering, combining sorbent and synthetic non-wovens for superior performance.

- **Optimized Sorbent Selection:**

Alkegen expertise ensures the selection of the best sorbents with the right chemical affinity, enhancing filtration efficiency.

- **Precise Basis Weight:**

Achieve optimum performance with carefully calibrated basis weight, minimizing pressure drop and maximizing product lifespan.

- **Reliability and Longevity:**

Many filter media with activated carbon falls short in cleanroom requirements. Alkegen filter media guarantees high performance, extended lifespan, and low maintenance costs.

- **Global Manufacturing Footprint:**

With a complete product range covering all efficiencies, LydAir GP is your one-stop shop for cleanroom filtration solutions.

- **Optimal Distribution:**

Ensures a well-distributed sorbent on nonwoven materials.



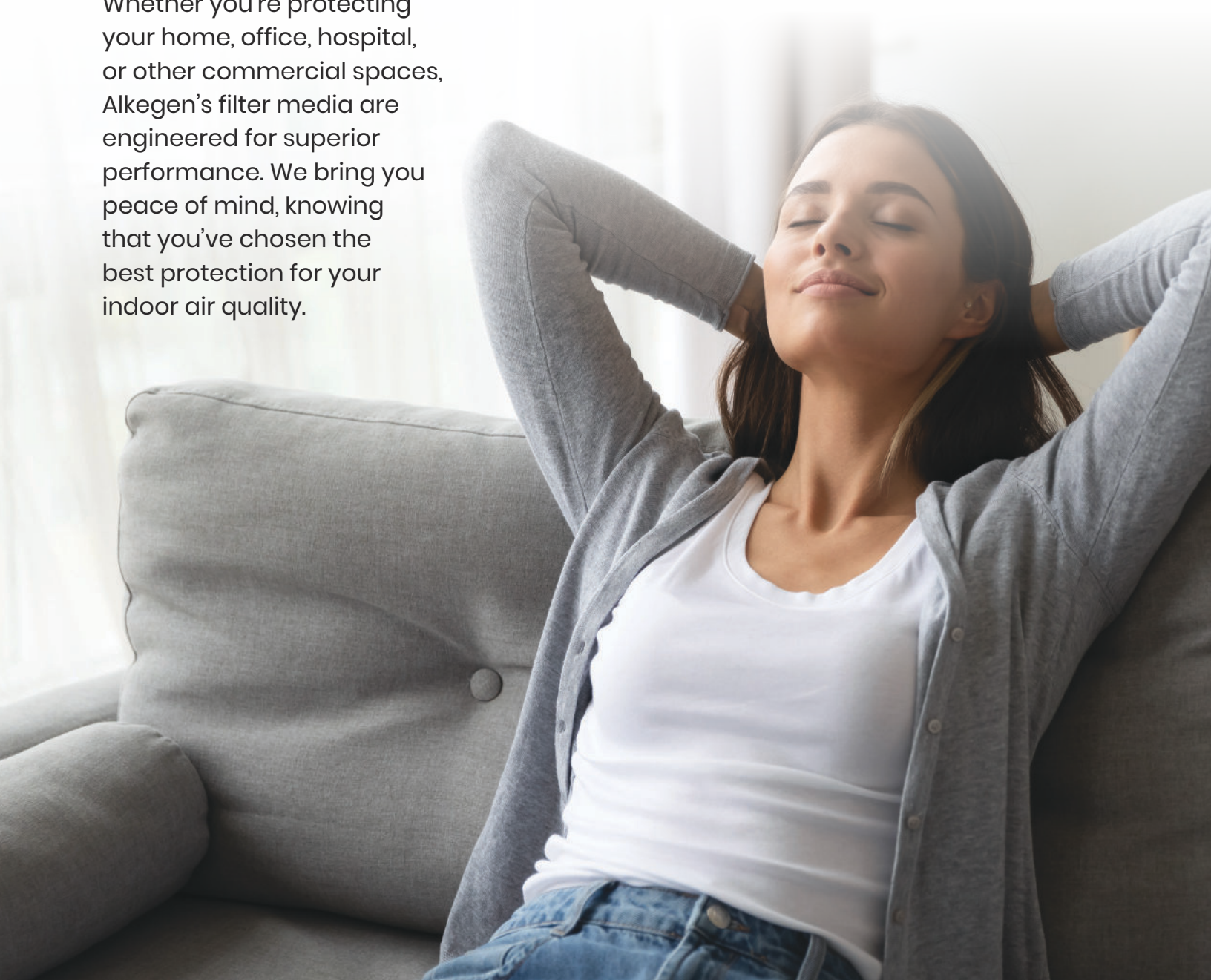
BREATHE EASIER WITH

ALKEGEN

The Ultimate Protection Against Wildfire Smoke

Wildfire smoke is a serious health risk, but with Alkegen's innovative filtration media solutions, you can take control of the air you breathe. Our LydAir GP filter media is designed to protect your indoor spaces from the dangerous particles and gases released by wildfires, ensuring that your family, employees, and customers can breathe clean, safe air.

Whether you're protecting your home, office, hospital, or other commercial spaces, Alkegen's filter media are engineered for superior performance. We bring you peace of mind, knowing that you've chosen the best protection for your indoor air quality.



Industries We Serve



FILTRATION
& CATALYSIS



INSULATION



TRANSPORTATION
& OFF-ROAD
EQUIPMENT



BATTERY



CONSTRUCTION &
FIRE PROTECTION



Worldwide Reach and Access

Alkegen has over 60
manufacturing facilities and
7,500+ employees worldwide.

ALKEGEN

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