

MARKET SEGMENT BROCHURE: COMMERCIAL BUILDINGS

ENVIRONMENTAL EXCELLENCE FOR YOUR BUILDING & TENANTS

GET LEED POINTS, IMPROVE YOUR AIR QUALITY AND
SAVE ON ENERGY COSTS, ALL WHILE INCREASING
TENANT SATISFACTION



purafil

Filtration Group®

ARE YOU GIVING TENANTS THE PLATINUM EXPERIENCE?



IMPROVED INDOOR AIR QUALITY FOR A BETTER TENANT EXPERIENCE

Maintaining a clean and comfortable indoor environment for your occupants is essential to tenant satisfaction and retention, especially when you consider that one in three workers left a job due to building conditions. According to a Bloomberg work study, persistent, foul odors are the fourth most common complaint in commercial office buildings. This highlights why controlling airborne pollutants and contaminants is so important. But are you filtering for all the indoor sources of pollution? Odors can come from cleaning aerosols, printers, bathrooms, kitchens or other office supplies. These can all greatly reduce the indoor air quality. VOCs, furniture, formaldehyde, NO_x, SO_x and other harmful pollutants can not only create an unpleasant environment for tenants, it can compromise their health and safety, too.

Purafil Solution: Purafilter, Bathroom Odor & Ammonia Blend, PuraShield

KEEPING OUTDOOR SOURCES OF POLLUTION OUTSIDE

You want your tenants to stay in your building, which is why you try to create an environment that is comfortable and conducive to their needs. You're keeping your building clean on the inside by addressing indoor pollution, but have you considered how outdoor pollution will impact your indoor air? Odors caused by pollution can come from traffic, loading docks or nearby industrial plants, which is both unpleasant *and* unhealthy.

Purafil Solution: Outdoor Pollution Blend with PK Modules and Side Access System (PSA)

PURAFIL GETS YOU TO PLATINUM

Earning LEED® (Leadership in Energy and Environmental Design) certification requires buildings to be environmentally conscious and more energy efficient. One such way to do so is through improvements to HVAC systems and indoor environmental quality.

Implementing an effective HVAC strategy could net you more LEED points and allow you to save big on energy costs in the long run! This all works as a part of the overall design and creating a building that follows LEED guidelines.

Purafil Solution: Front Access System (FSA), Side Access System (PSA), Purafilters

BETTER BUILDINGS WITH PURAFIL

DUKE ENERGY CENTER ACHIEVES PLATINUM STATUS

The Duke Energy Center in Charlotte, NC is a striking 48-story office building that sought out the prestigious LEED New Construction Platinum Certification. This is the best possible rating a commercial building can earn.

Purafil applied the Indoor Air Quality from ASHRAE Standard 62.1 (IAQP) procedure, which helped the center earn points towards its LEED certification for reducing energy use. By cleaning and recirculating the toilet exhaust with PuraGRID™ filters, they were able to reduce the amount of outside air required to replenish the air. This also allowed for cost savings on capital equipment expenses.

The Duke Energy Center earned its LEED Platinum Certification while saving on capital equipment expenses and ongoing energy costs.

Purafil, Inc. is the leading manufacturer of filtration media, scrubbers, and monitors that provide a safe and comfortable environment. Our products and solutions identify and remove harmful and unpleasant particles, gases, odors, bacteria, and viruses from the environment. The results are increased comfort levels, reduced energy costs, and confidence that your building will provide the ideal tenant experience.

PURAFIL'S MEDIA ADVANTAGE



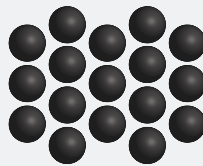
WHEN ONE-SIZE-FITS ALL JUST DOESN'T WORK

Are you ready for a custom solution that thoroughly eliminates the gases that activated carbon leaves behind? A one-size-fits-all solution won't cut it, which is why Purafil specially engineered custom blends designed to address the unique problems you face while *permanently* removing gases—even the ones carbon can't remove. This is done through chemisorption, a process that chemically transforms gases into harmless solids that remain trapped inside the media.

Problem Gases In The Air Stream



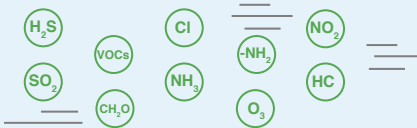
Activated Carbon



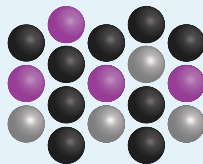
Gases Carbon Fails to Eliminate:



Problem Gases In The Air Stream



Purafil Custom Media



Purafil Peace of Mind



JET & DIESEL EXHAUST BLEND:

Removes exhaust from local traffic and nearby vehicles, providing your tenants with a clean, healthy environment. The World Health Organization (WHO) shows that exposure to nitrogen oxides can cause irritation of the eyes, skin and respiratory system, headaches, difficulty breathing and asthma. This blend removes common exhaust gases including H_2S , NO_2 , SO_2 , HC , $VOCs$ and CH_2O .

BATHROOM ODOR & AMMONIA BLEND:

Removes common bathroom odors—including urine, ammonia and chlorine—to protect occupants and provide an odor-free environment. The Center for Disease Control and Prevention cites coughing, eye irritation, burns on the throat, skin, eyes and lungs and even lung disease as common symptoms of ammonia exposure. This blend removes bathroom gases including H_2S , NH_3 and $-NH_2$.

OUTDOOR POLLUTION & CORROSION BLEND:

Eliminates pollution and contaminants to protect employees by ensuring a safe space, free from hydrogen sulfide. Hydrogen sulfide exposure can result in nausea, headaches, fatigue, coughing, eye and throat irritation and even unconsciousness, according to the US Department of Labor. This blend removes common gases including H_2S , NO_2 , SO_2 , $VOCs$ and O_3 .

KITCHEN ODOR & SMOKE BLEND:

Captures smoke and common kitchen odors, including those resulting from burnt food, cheese, mold and tobacco. The EPA defines the effects of exposure to sulfur oxides as difficulty breathing, respiratory system problems and asthma irritation. It can also cause nose and throat irritation and excessive coughing. Fight against sulfur oxides with Purafil's custom media. This blend removes common kitchen gases including H_2S , NO_2 , SO_2 , $VOCs$ and Cl .

ADVANCED FILTERS FOR EVERY NEED

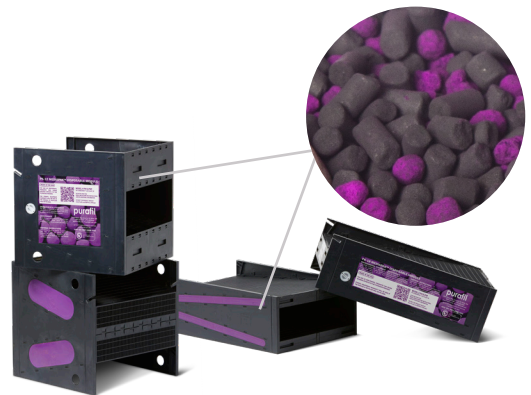
MERV8 With PuraWard

Upgrade your HVAC filtration without increased pressure drop, airflow reduction or increased energy costs. Using a microtechnology containing an EPA registered antimicrobial additive, the PuraWard filter is protected from many viruses, bacteria, and mold using copper and silver†.



PK-18 Modules

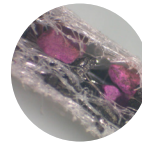
Purafil modules will help you save energy, money and time while improving indoor air quality. The specialty design features a durable, adhesive-free construction with highly aerodynamic airfoil screens, easy access sampling ports and the patented Posi-Track™ Purafil technology. Purafil's modules can be inserted into existing module or cassette based equipment. Purafil's professional team of scientists and engineers have created an aerodynamic airfoil screen design. This enhancement provides a lower pressure drop and increased energy savings.



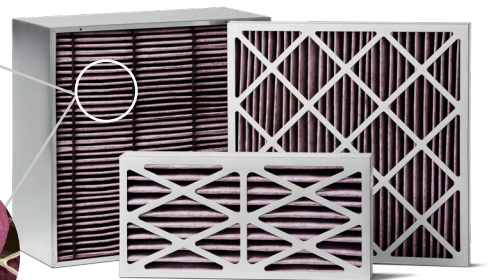
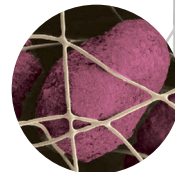
The Purafilter®

Combination chemical and particulate filter designed to replace existing particulate filters in retrofit or rework applications. The Purafilter contains Purafil SP Blend media and is useful in applications where space limitations exist. Purafil engineers are the first to successfully incorporate sodium permanganate media in a bicomponent fiber matrix, which does not require the use of adhesives so the media is fully available for reaction with gaseous chemical contaminants. Purafil's patented media formulation is evenly distributed throughout the filter structure to assure the highest filtration efficiency

16X Magnified



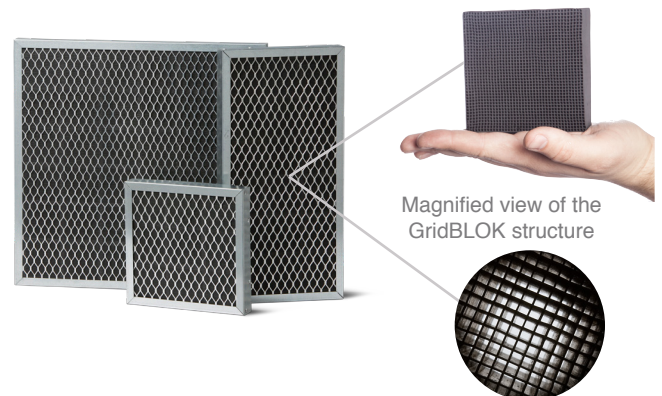
32X Magnified



PuraGRID™ Filter with GridBLOK™ Technology

Made of extruded monolithic block consisting of a large number of small parallel cells or channels. The GridBLOK™ is composed of essentially 100% adsorbent materials allowing the entire composite structure to function as a gas filter within the PuraGRID Filter. This filter features no bypass, low pressure drop and turbulent air flow with full utilization of the media. PuraGRID filters can be used inside Purafil's custom engineered equipment or installed into existing air handling systems. Purafil manufactures multiple GridBLOK formulations designed to eliminate common indoor pollutants.

GridBLOK Media



†Filter protected by an EPA-registered antimicrobial additive

HOW AIR FILTRATION IMPACTS LEED CERTIFICATION

HOW PURAFIL HELPS EARN POINTS TOWARDS LEED CERTIFICATION

Environmentally and energy-conscious builders are utilizing LEED (Leadership in Energy and Environmental Design) guidelines to build green structures. This rating system provides a framework for creating efficient, sustainable buildings. LEED certifications are recognized worldwide.

POINTS TOWARDS LEED CERTIFICATION

RATING CATEGORY	POINTS AVAILABLE	SUGGESTED AIR FILTRATION STRATEGY
Energy & Atmosphere Prerequisite: Minimum Energy Performance	Required	Quantify the energy implications of various filter selections
Energy & Atmosphere Credit: Existing Building Commissioning – Analysis	2	Perform a life cycle cost analysis and energy analysis on the HVAC filtration system
Energy & Atmosphere Credit: Existing Building Commissioning – Implementation	2	Choose air filters with lower resistance to air flow (such as PuraGRID and Purafilter) and follow an optimized change out schedule
Materials & Resources Credit: Purchasing – Ongoing	1	Use extended-life filters (such as PuraGRID) to reduce change outs and minimize waste generated while minimizing energy consumption
Indoor Environmental Quality Credit: Indoor Air Quality Management Program	2	Include all air filters in the I-BEAM-based IAQ management program & follow an optimized change out schedule
Indoor Environmental Quality Credit: Enhanced Indoor Air Quality Strategies	2	Utilize MERV 13 filters for all systems supplying outdoor air to occupied spaces and follow an optimized change out schedule

PURAFIL CUSTOM EQUIPMENT



FRONT ACCESS SYSTEM (FAS)

Modular frames are individually tracked for Purafil media modules. The FAS is specified in retrofit applications or custom air handling units. Airflows up to 2,000 CFM per 24" frame



PuraShield 500

A compact HEPA recirculation unit with a sound level less than 60dB, making it exceptionally quiet. It has a sleek design that fits in anywhere and casters for easy portability. Airflows up to 250 CFM



PURAFIL® SIDE ACCESS SYSTEM (PSA)

The PSA is designed for both particulate and gaseous contaminant control and works in conjunction with the facility's air handling system. Airflows of 250 - 50,000 CFM.