

AcroFiltrex

The water-based binder you
need for better filtration

Diversified series for advanced protection



■ - BASF

We create chemistry

AcroFiltrex

the water-based binder
you need for better filtration

Effective air filtration has long been an essential component for modern industries. From automotive air filters for passenger cars to industrial filters for gas turbines, filters play a key role in removing contaminants to protect engines.

Filtration media is comprised of impregnated cellulosic fibers using a “wet-laid” process. Because they are innately soft and can easily be damaged through prolonged contact with water, effective air filtration relies heavily on a high-performing binder to provide the filter paper with an appropriate level of strength, stiffness and water resistance.

Water-based binder

- ✓ **Eco process** without the emission of hazardous solvents
- ✓ **Energy saving** without the need for solvent treatment
- ✓ **On-line saturation** made possible
- ✗ Lower water resistance and wet strength for impregnated products



AcroFiltrex can tackle these challenges

VS

Solvent-based binder

- ✓ **Stiffer materials** better suited for certain applications
- ✓ **Less binder** required, potentially improving cost efficiency
- ✗ High emissions
- ✗ Production safety concerns
- ✗ Two-step process with an individual impregnation line



AcroFiltrex

BASF is proud to introduce AcroFiltrex, a complete system of water-based binders designed for air filtration. From economical options to those with specific functionalities, AcroFiltrex has a wide range of product to fit your needs.

AcroFiltrex includes three product ranges that have been custom-formulated for superior performance across diverse scenarios.



CLASSIC

AcroFiltrex CLASSIC provides excellent performances and highest durability with water-based binders.



PURE

AcroFiltrex PURE is eco-friendly, no formaldehyde added, and with advanced sustainability attributes.



PLUS

AcroFiltrex PLUS dispersions is designed specifically for high-end filtrations niches with additional functionality.

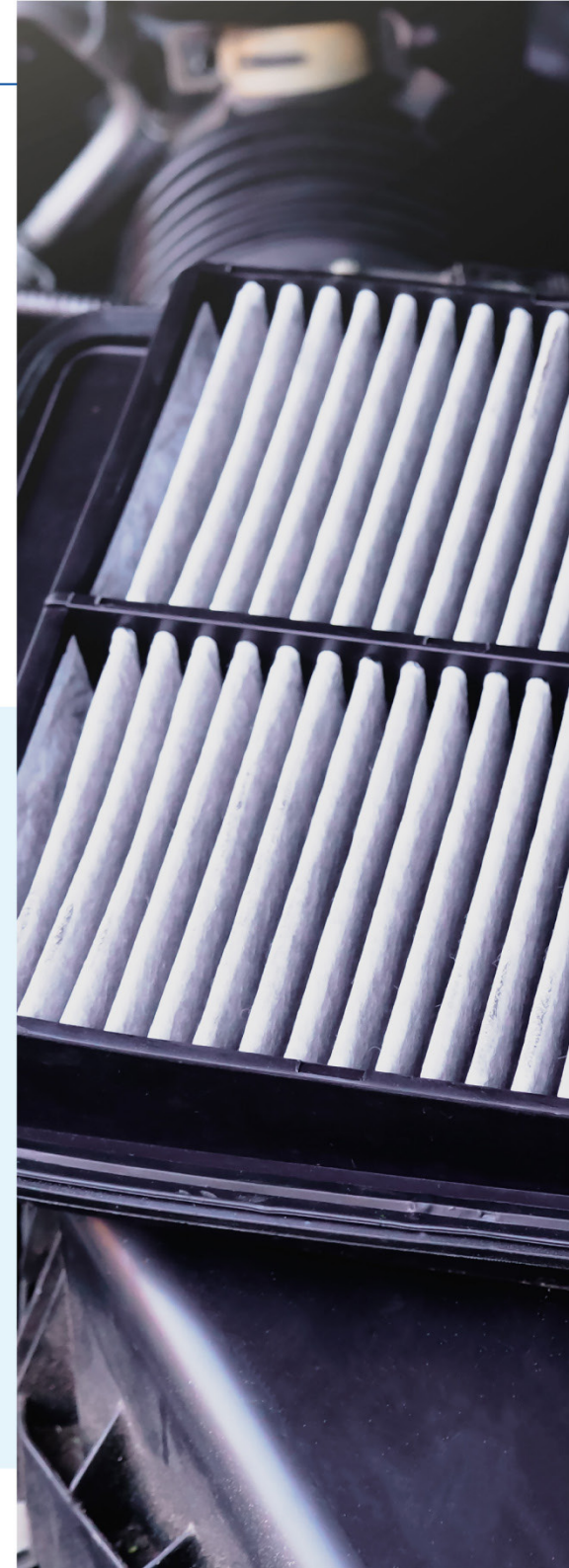
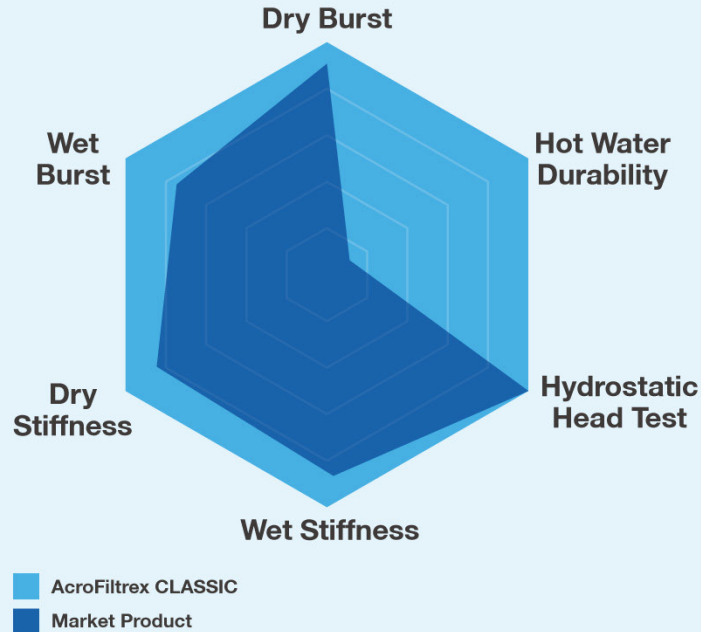
AcroFiltrex CLASSIC

Setting New Standards for Filtration

Excellent water resistance, high physical strength, and exceptional stiffness — key characteristics for a fine filter are now all possible with AcroFiltrex CLASSIC. The uniquely engineered dispersions are designed to offer exceptional water resistance while keeping formaldehyde engineered levels low.

AcroFiltrex CLASSIC products outperform market products in many aspects, but above all, its superior hot water durability has granted it the top position in the market.

Our CLASSIC binders are designed to enable the filter to withstand tough conditions, even at high humidity levels and temperatures. It ensures AcroFiltrex CLASSIC filters deliver the extra durability and extended service life.



AcroFiltrex PURE

No Added Formaldehyde Guarantee

Most market binders release formaldehyde during drying and post-curing processes to achieve their strength requirements. However, hazardous and highly carcinogenic formaldehyde will continue to be released during the full life cycle of the filter paper.

Safety and Sustainability remain the utmost priority of BASF. Therefore, we have specifically designed low VOC with no-formaldehyde-added binders for air filtration applications. These binders also have upgraded wet strength, reinforced chemical and heat durability to excel in the toughest environments.

Normalized Performance of AcroFiltrex PURE and Market Product (%)



* Substrates may contain low levels of formaldehyde.

AcroFiltrex PURE

AcroFiltrex PLUS

If you are looking to differentiate your filters in the market, AcroFiltrex PLUS is your best option. We offer binders with advanced functionalities that are designed to excel in niche markets. Binders with flame retardancy, formaldehyde abatement, or ultra hydrophobicity are now achievable with AcroFiltrex PLUS binders.

01

Flame Retardancy

02

Formaldehyde Abatement

03

Ultra Hydrophobicity

AcroFiltrex PLUS

01

Flame Retardancy

AcroFiltrex PLUS products provide end users a critical layer of fire protection by offering self-extinguishing capabilities in case of emergency.



Flame retardancy test referring to GB/T 14656 and DIN 53438

Superior Thermal Aging Resistance

Besides flame retardancy properties, our binders are also engineered to have **superior thermal aging properties**. These imbue the filter paper with exceptional mechanical durability, enabling them to withstand high pressures (Mullen > 200 kPa), even after aging at 160°C for 24 hours.

This translates into additional protection for room occupants, yourself, and your loved ones.

✓	AcroFiltrex PLUS	Market Product
Mullen > 200 kPa	Mullen < 50 kPa	

Paper color after 24hrs at 160°C

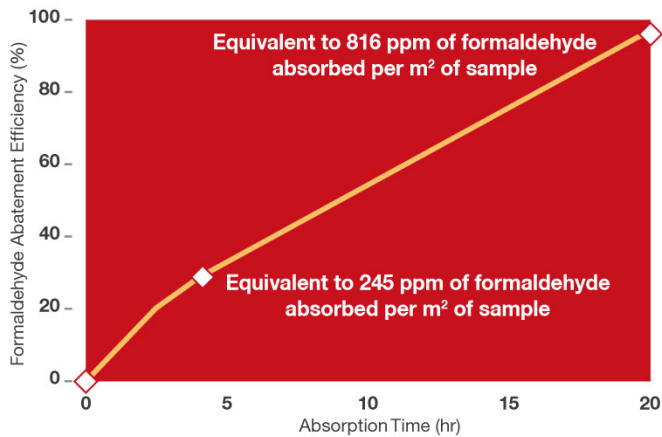
AcroFiltrex PLUS

02

Formaldehyde Abatement

Advanced formulation allows our binders to capture free formaldehyde from the surroundings, ensuring a safe and pleasant environment.

Amount of formaldehyde captured by the binder after submerging in 50 ppm formaldehyde solution



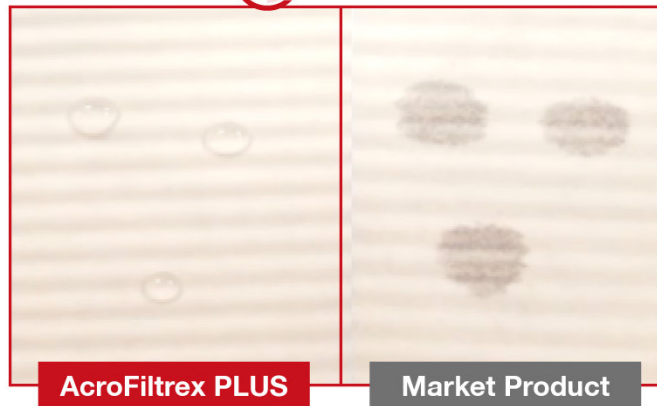
03

Ultra Hydrophobicity

Selected AcroFiltrex PLUS products are extremely hydrophobic. This prevents water vapor from damaging the filter paper, thus prolonging the overall service life of the filter.

Ultra hydrophobic binders offer more than 30 minutes of penetration time when dripped with 36 vol.-% ethanol/water solution, making it highly effective in delaying the absorption of moisture by cellulose fibers.

30 minutes



Empowering Functions by Acrodur®

The Acrodur® Advantage

Acrodur® is an all-rounded crosslinking agent designed to perform in a variety of contexts. The addition of Acrodur® to AcroFiltrex products greatly improves the mechanical properties of the resultant filter, as shown in the graph below.

AcroFiltrex



CLASSIC



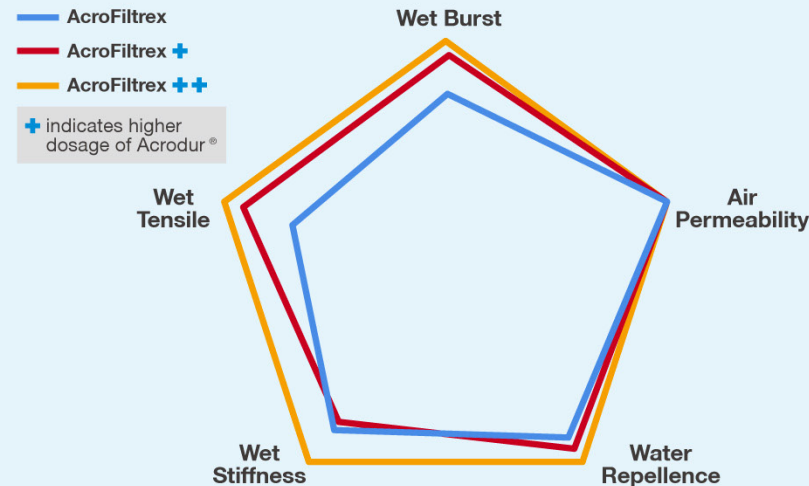
PURE



PLUS



Acrodur®



- Melamine formaldehyde completely replaced with Acrodur®
- Formaldehyde free: eco-friendly for the full life cycle of the filter
- Greatly improved wet stiffness, tensile and burst strength
- A completely new level of water resistance, chemical and heat durability
- Improved flame retardancy

About Acrodur®



Importance of Biomass Balance

Lower Your Product Carbon Footprint with **Biomass Balance AcroFiltrex**

A groundbreaking way of using renewable resources in production

BASF's biomass balance approach contributes to the use of renewable raw materials in its integrated production system, and can be applied to AcroFiltrex products.

Benefits of the Biomass Balance Approach



Promotes the use of renewable resources



Retains the same product quality and properties



Saves fossil resources and reduces greenhouse gas emissions

Certified by REDcert²

REDcert² is recognized throughout the European Union as a certification system for the sustainable use of biomass.

BASF is the **first chemical company** to certify biomass-balanced products according to the new REDcert² standard for the chemical industry.



Scan to learn more



SUMMARY

Key Category Benefits

This table summarizes the key performance properties and notable features of the AcroFiltrex CLASSIC, PURE and PLUS. All three different levels serve with good performance in flexibility, water resistance, and heat and chemical durability with different additional features to fulfil consumer's needs.



CLASSIC



PURE



PLUS

PERFORMANCE

High Physical Strength & Stiffness



Water Resistance



Excellent Heat and Chemical Durability



ADDITIONAL FEATURES

No Formaldehyde Added



Extra Functionality of Your Choice:

* Flame Retardancy

* Ultra Hydrophobic

* Formaldehyde Abatement



Lower Carbon Footprint with Biomass Balance



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