AFM® NG

A unique hydrophobic surface for advanced adsorption of organics and microplastics.

AFM® ng
ACTIVATED FILTER MEDIA

THE MEDIA

AFM® is an inert, amorphous aluminosilicate (glass) manufactured by up-cycling post-consumer green and brown glass bottles in dedicated, state-of-the-art factories designed and operated specifically for the production of activated glass water filtration media. AFM® is used as filter media in single or dual media filtration in both open (RGF) and closed (pressure) filters for treatment of various sources of water such as ground water, surface water, seawater and waste water treatment.

FEATURES

SELF-STERILIZING SURFACE
resistant to bacterial growth

INCREASED SURFACE AREA
for superior filtration properties

ACTIVATED SURFACE
for the adsorption of fine particles and organic matters

AFM® NG

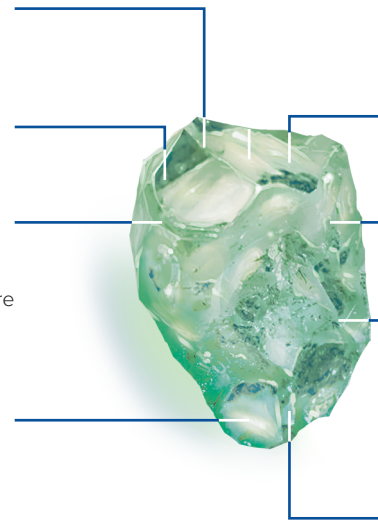
BENEFITS

SAFE WATER
Prevents the transmission of pathogens (E.g., Crypto)

CLEAR WATER
Offers a stable 1-micron filtration rate.

PATENTED ACTIVATION PROCESS
AFM® is made from pure selected glass and exposed to a unique 3-step activation process to become self-sterilizing and acquire superior mechanical & electro-static filtration performance.

100% BIO-RESISTANT FILTER MEDIA
AFM® is the only filter media which fully prevents biofouling and channeling inside your filter.



LOW OPERATING COSTS
Saves backwash water (up to 50%) and chemicals.

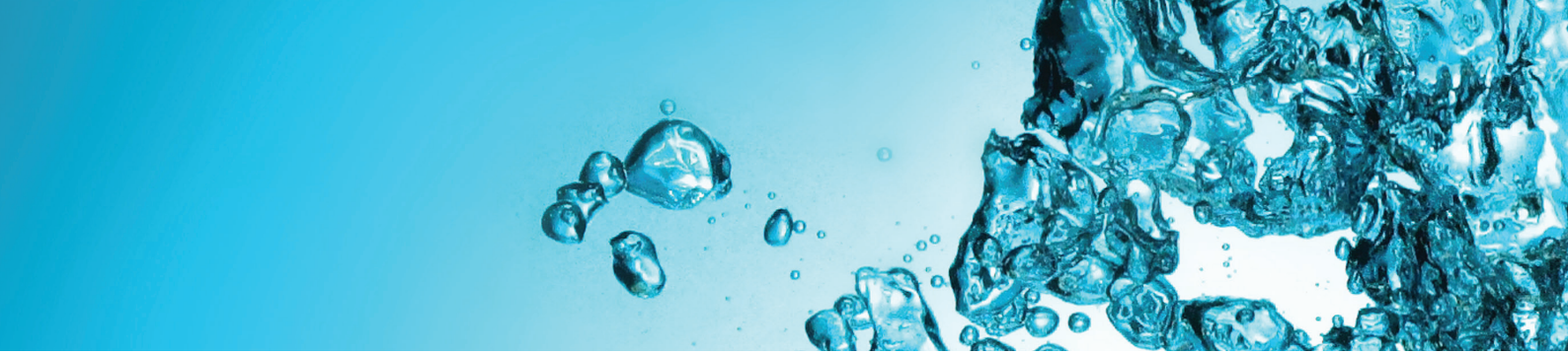
THE FINEST FILTRATION
With a certified 1 micron filtration rate **without flocculation.**

THE MOST SUSTAINABLE FILTRATION
AFM® saves resources such as water, chlorine and energy thanks to more efficient and slower backwashes (>40m/h). It will also last much longer than any other filter media for a guaranteed return on investment.

ADAPTED TO ALL TYPES OF SAND FILTERS
AFM® can be installed in all sand filters without the need of additional investments in infrastructure.

SPECIFICATIONS

Particle size	0.4 - 0.8 mm
Effective size (expressed as d10)	0.414 mm
Hardness	> 7 mohs
Sphericity (average range)	0.78
Uniformity coefficient (d60/D10)	<1.5
Specific gravity	2.4 kg/l
Bulk bed density	1.26 kg/l
Service flow	20m/h
Backwash	30m/h



PROPERTIES

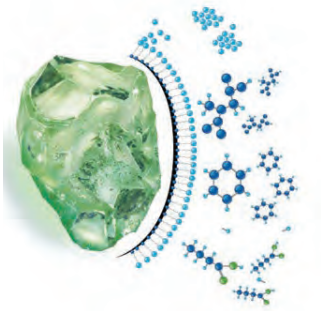
AFM® is an inert, amorphous aluminosilicate (glass) manufactured by up-cycling post-consumer green and brown glass bottles in dedicated, state-of-the-art factories designed and operated specifically for the production of activated glass water filtration media. AFM® is used as filter media in single or dual media filtration in both open (RGF) and closed (pressure) filters for treatment of various sources of water such as ground water, surface water, seawater and waste water treatment.

DESCRIPTION

AFM® particle shape and size distribution are optimised for filtration. AFM® is not a passive filter media, the surface is activated by using a secret formula of chemicals and heat in a SolGel-like process, where the surface structure of each grain of media is altered to control the surface properties:

AFM®NG HYDROPHOBIC, NEUTRAL SURFACE CHARGE

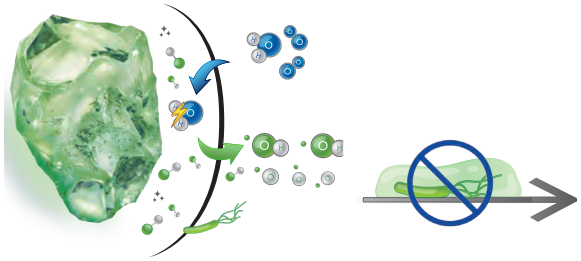
- Superior mechanical filtration up to 1µm particles (95% removal)
- Adsorption of organic substances including Hydrocarbon and Microplastic



SURFACE PROPERTIES

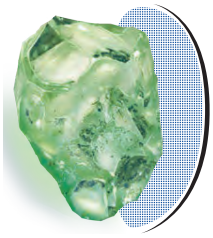
Self-sterilizing surface resistant to bacterial growth

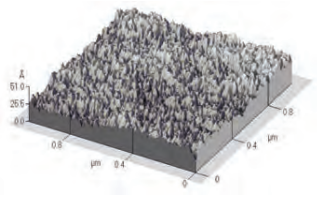
- Water molecules and dissolved oxygen
- Transformed into free radicals on the surface of AFM® (catalytic reaction)
- Inhibits biofouling and protects AFM® from bacterial colonisation. Free radicals oxidise dissolved organic matter and heavy metals.



INCREASED SURFACE AREA FOR SUPERIOR FILTRATION

- Large surface area provides for superior mechanical filtration
- Optimal sphericity, uniformity coefficient, particle size and shape of grain for best hydraulic performance (not round, not flat, no broken bits of glass)
- Surface Area by Langmuir Isotherm Method 1'000kg: AFM = 50.000 m^2 / Sand 3.000 m^2





CHEMICAL TOLERANCE

OXIDISING AGENTS
AFM® may be exposed to high concentration of oxidising agents:

Free Chlorine	10 g/l
Chlorine dioxide	10 g/l
Ozone	10 mg/l
Hydrogen peroxide	10 g/l

ACIDS AND ALKALI
AFM® is stable over a wide range of pH conditions, but strong acids and caustic conditions should be avoided:

pH range	pH4 to pH10

SALINITY & TDS
Salinity and high TDS concentrations have no phyiscal or chemical effect on AFM®. AFM® is used for marine applications with up to 40g/l and for some systems up to 165g/l

TEMPERATURE
AFM® is not affected by temperature, as long as the water is liquid then AFM® may be used.

Temperature range	0 to 100°C

SILT DENSITY INDEX - SDI
SDI (Silt Density Index = SDI) is also depending on type of particles and particle size distribution.
Proven in a pilot and full scale application with a feed of SDI 5 to 5.5 we reaching SDI < 3.

SDI	< 3

ORDER INFORMATION

Name	AFMng Grade 1 0.4-0.8mm
Axapta code	3034100012
Packaging	21 kg bags

CERTIFICATION

AFM® is manufactured under ISO9001-2015 conditions and is certified under DWI EC Reg31, NSF50 & NSF61 for swimming pools and potable water use and HACCP certified for food and drinks markets.

NSF-61

NSF/ANSI 61

UK Drinking Water Inspectorate