AFM®
ACTIVATED FILTER MEDIA

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DRYDEN AQUA
SUSTAINABLE WATER QUALITY

Technical Data Sheet

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Specification

AFM® (Activated Filter Media) is a high-performance filtration media engineered from green and brown soda-lime-silica glass. It is processed to achieve optimal particle size, shape, and distribution. Critical parameters such as particle size distribution, sphericity, and uniformity coefficient are tightly controlled to ensure consistent filtration and backwash performance across applications.

During manufacturing, the glass undergoes a surface modification "activation" process that increases the specific surface area while simultaneously imparting resistance to biofouling. This treatment also modifies the surface charge characteristics: AFM®-s exhibits a negative surface charge, while AFM®-ng has a hydrophobic, neutral surface charge. These engineered properties contribute to superior filtration performance, including enhanced particle removal efficiency, higher filtration velocities, and improved backwash effectiveness.

AFM Type & Grade

AFM®s (Standard) - Negative surface charge
- AFM®s Grade 0
- AFM®s Grade 1
- AFM®s Grade 2
- AFM®s Grade 3
- AFM®s DIN

AFM®ng (New Generation) - Hydrophobic, neutral surface charge
- AFM®ng Grade 1
- AFM®ng Grade 2
- AFM®ng DIN

AFM® Grade & Specification[1]

Specification	Grade 0	Grade 1	Grade DIN	Grade 2	Grade 3	Standard
Particle size	0.25 - 0.5 mm	0.4 - 0.8 mm	0.7-1.2mm	0.7 - 2.0 mm	2.0 - 4.0 mm	ISO 13322-2 EN 12902:2004
Undersized	≤ 5 %	≤ 5%	≤ 5%	≤ 10%	≤ 10%	ISO 13322-2 EN 12902:2004
Oversized	≤ 5 %	≤ 5%	≤ 5%	≤ 10%	≤ 10%	ISO 13322-2 EN 12902:2004
Effective size (expressed as d10)	0.25 - 0.29 mm	0.40 - 0.43 mm	0.72 - 0.82 mm	0.80 - 1.0 mm	2.0 - 2.4 mm	ISO 13322-2 EN 12902:2004
Hardness	5.5 - 6.5 mohs					ASTM C-730
Sphericity (average range)	-	0.79 ± 0.03	0.81 ± 0.03	0.80 ± 0.03	0.81 ± 0.03	ISO 13322-2 EN 12902:2004
Uniformity coefficient (d60/d10)	1.3 - 1.8					ISO 13322-2 EN 12902:2004
Roundness	-	0.65 ± 0.05				ISO 13322-2 EN 12902:2004
Particle Density (grain) [2]	2.4 - 2.52 kg/l					GTS QP9
Bulk bed density uncompacted	1.24 kg/l ±0.03	1.33 kg/l ± 0.03	1.36 kg/l ±0.03	1.40 kg/l ± 0.03	1.43 kg/l ±0.03	EN 12902:2004
Acid Solubility	<0.2%					EN 12902:2004
Loss on Ignition (LOI)	<0.03%					EN 17978:2024

Notes
(1) Specifications are measured and certified at point and time of manufacture
(2) Glass Technology Services, Sheffield, UK procedure QP9 - 'X-ray fluorescence analysis - predictive density measurement' Specific Gravity (Grain): 2.40–2.52
(3) Porosity - calculated using average bulk density and average particle density

Chemical composition

Composition (oxides)	Percentage +/- 10%	Composition (oxides)	Percentage +/- 10%
Silica	72	Calcium	11
Magnesium	2	Lanthanum	1
Sodium	13	Cobalt	0.016
Aluminium	1.5	Lead	<0.005
Antinomy	<0.001	Mercury	<0.0005
Arsenic	<0.0001	Titanium	<0.1
Barium	0.02	Rubidium	<0.05
Cadmium	<0.0001	Iridium	<0.05
Chromium	0.15	Platinum	<0.0001
Ferric	0.15	Manganese	0.1

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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

pH Resistance

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®.

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

Chemical resistance

AFM® is chemically resistant to solvents and hydrocarbons.

Purity

During the manufacturing process the AFM® is cleansed to a purity of >99.95%

Dryden Aqua Quality & Certification

- AFM is **approved in UK** under regulation 31 of the **Water Supply (Water Quality)** regulations 2016 (as amended)
- AFM is **certified** by WQA to **NSF/ANSI/CAN 61**and **NSF/ANSI/CAN 372 Drinking Water Systems Components**
- AFM is **approved in Switzerland for use in Drinking Water Treatment** according to the ordinance of the federal department of home affairs on drinking water (TBDV) Annex 4, paragraph 4.
- AFM is produced under **certified HACCP** principles for **use in food and beverag production**
- Dryden Aqua is certified to integrated management control systems **ISO-9001, ISO-14001, ISO-45001**