

AFM[®] SPECIFICATION

V25.0 Metric August 2025

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, AFM[®] undergoes a surface activation process that increases the specific surface area while simultaneously imparting resistance to biofouling. This treatment also modifies the surface characteristics with AFM[®] exhibiting a hydrophilic negative 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

Grade	Type	Particle size	Function
0	AFM [®] s	0.25 - 0.5mm	Extra fine filtration
1	AFM [®] s/ng	0.4 - 0.8mm	Main filtration
DIN	AFM [®] s/ng	0.7 - 1.2mm	Special filtration media for wastewater & highly polluted water
2	AFM [®] s	0.7 - 2.0mm	Filtration and support
3	AFM [®] s/ng	2.0 - 4.0mm	Support layer



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
Specific gravity (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'
- (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
Antimony	<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
Inorganic undefined	<0.0005	Organic undefined	<0.0005



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 physical 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
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Chemical resistance

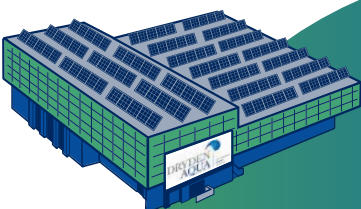
AFM® is chemically resistant to solvents and hydrocarbons.

Purity

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

AFM® CERTIFICATIONS

- AFM® complies with **EN17978**, glass granulates, for **treatment of water for human consumption**
- AFM® complies with the **Directive (EU) 2020/2184** on the quality of **water intended for human consumption**
- 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 50** and **NSF/ANSI/CAN 61 & 372 Drinking Water Systems Components**
- AFM® is **approved in Switzerland** according to **drinking water** ordinance (TBDV) Annex 4, paragraph 4
- AFM® is produced under **certified HACCP** principles **for use in food and beverage production**
- Dryden Aqua is certified to integrated management control systems **ISO-9001, ISO-14001, ISO-45001**



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