

# NXMF

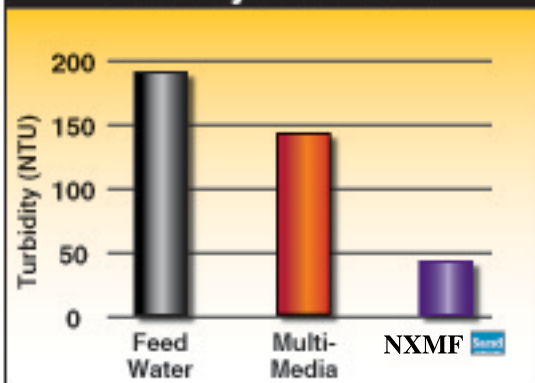


## A radically high performance silt, sediment and turbidity media.

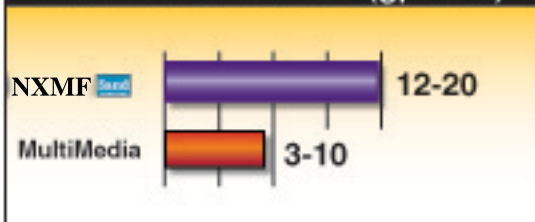
### Filtration Performance



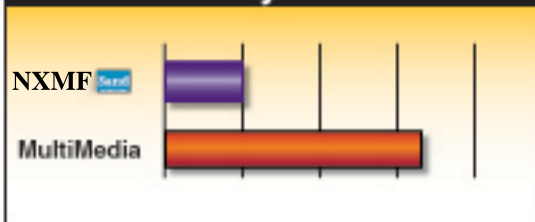
### Turbidity Reduction



### Service Flow Rate (gpm/ft<sup>2</sup>)



### Media & System Cost



### Introduction

NXMF is based on a rare natural mineral that is highly processed and graded. Its unique properties allow it to radically alter the performance and cost of media filtration. The hardness, stability and microporous character of NXMF makes it a perfect filtration media for virtually every application in the water and wastewater treatment industry.

### Features

- High filtration performance-3-5 micron removal.
- High capacity filtration throughout the entire NXMF bed depth provides more than twice the capacity of multimedia filtration.
- High flow- 3-4 times that of multimedia with superior filtration.
- Long lasting media (>5 years) not consumed in the process.
- Simple periodic backwash keeps the media clean and operating efficiently.

### Applications

- RO Pretreatment-superior SDI reduction
- Cooling Towers-unequaled Turbidity removal
- Municipal Water Treatment, pressure and gravity filters-higher flow, lower pressure drop and superior filtration performance
- Wastewater Polishing-exceptional TSS removal
- Precipitated metals removal
- Carwash reclaim and recycling
- Irrigation

### Physical Properties

- |                             |   |
|-----------------------------|---|
| • Composition               | High Purity Alumino-Silicate                        |
| • Size                      | 0.4-1.4 mm (approx. 14x40 mesh)                     |
| • Color                     | Dark Gray   |
| • Surface Area              | 25m <sup>2</sup> /gram                              |
| • Surface Absorption        | Hydrophillic  |
| • Thermal Stability         | Stable to 500° C                                    |
| • Coefficient of Uniformity | 1.7   |
| • Bed Void Volume           | 55%   |
| • Surface Charge            | Net Negative  |
| • Bulk Density              | 55 lbs per ft <sup>3</sup> (0.67 kg/L)              |
| • Packaging                 | 1 ft <sup>3</sup> bags, 1m <sup>3</sup> supersacks. |

### Performance Characteristics

- |                        |  |
|------------------------|--|
| • Filtration (nominal) | 3-5 micron   |
| • Surface Loading      | 16-20 gpm/ft <sup>2</sup> (Typical)<br>12 gpm/ft <sup>2</sup> (Optimized for silt, SDI and ultrafine particulates) |

# NXMF

costs less : works better

## Example 1. Service Flow: 15 gpm Filtration: <10 micron

	NXMF	MultiMedia
Surface loading	15 gpm/ft <sup>2</sup>	5 gpm/ft <sup>2</sup>
Surface area req'd	1.0 ft <sup>2</sup>	3.0 ft <sup>2</sup>
Tank Dimensions	14 x 65	24 x 71
Media volume req'd	3.2 ft <sup>3</sup>	10.8 ft <sup>3</sup>
Media weight	216	1057
BW flow req'd	17 gpm	51 gpm
Daily BW volume	179 gal	510 gal
Filtration	<5 micron	<10 micron
Comparative cost	1X	3 X

## Example 2. Service Flow: 45 gpm Filtration: <10 micron

	NXMF	MultiMedia
Surface loading	15 gpm/ft <sup>2</sup>	5 gpm/ft <sup>2</sup>
Surface area req'd	3.0 ft <sup>2</sup>	9.0 ft <sup>2</sup>
Tank Dimensions	24x72	42x72
Media volume req'd	9.5 ft <sup>3</sup>	35.3 ft <sup>3</sup>
Media weight	672	3469
BW flow req'd	53 gpm	153 gpm
Daily BW volume	556 gal	1530 gal
Filtration	<5 micron	<10 micron
Comparative cost	1X	3.3 X

The tables above illustrate the advantages of NXMF by comparing two systems designed for the same service flow; one system based on NXMF, and one multimedia system (gravel, garnet, fine garnet, anthracite). Each system is based on best design practices for the respective media.

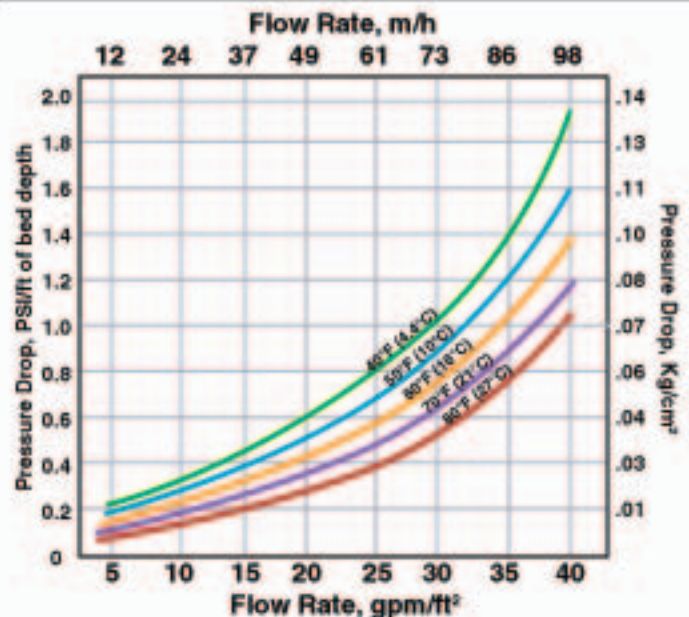
# NXMF

## Specifications

### Operating Characteristics

Service Flow	12-20 gpm/ft <sup>2</sup>
Backwash flow	13-22 gpm/ft <sup>2</sup>
Backwash duration	5-15 min
Backwash expansion	40-50%
Backwash frequency	Delta-P determined
Bed depth	30"-48" depending on application

## Pressure Drop vs Flow



## Typical Backwash Flow Requirement, vs Water Temp\*

Flow	80°F (27° C)	70°F (21° C)	60°F (16° C)	50°F (10° C)	40°F (4.5° C)
U.S. gpm/ft <sup>2</sup>	22.3	19.8	17.2	14.8	12.5
m/h	54.5	48.4	42	36.2	30.6

\*40% bed expansion.

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