

## Introduction

**nextsand** is based on a rare natural mineral that is highly processed and graded. It's unique properties allow it to radically alter the performance and cost of media filtration. The hardness, stability and micro-porous character of **nextsand** 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 **nextsand** 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> (0.88 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) |

# next<sup>TM</sup> Sand

Silt-Sediment-Turbid

## costs less : works better

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

	nextsand	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 lbs	1057 lbs
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

	nextsand	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	24" x 72"	42" x 72"
Media volume req'd	9.5 ft <sup>3</sup>	35.3 ft <sup>3</sup>
Media weight	672 lbs	3469 lbs
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 **nextsand** by comparing two systems designed for the same service flow; one system based on **nextsand**, and one multimedia system (gravel, garnet, fine garnet, anthracite). Each system is based on best design practices for the respective media.

**next**<sup>TM</sup> filtration technologies inc.

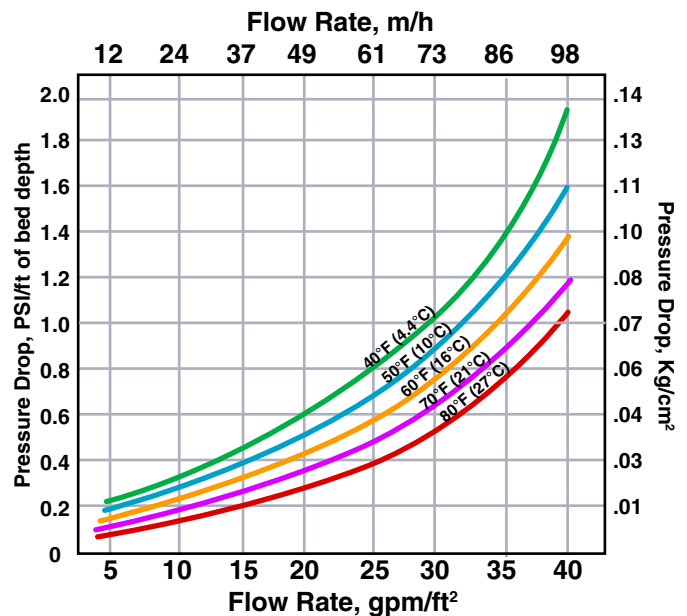
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### Specifications

#### 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.

*Distributed By:*