

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 ² /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 ³ (0.88 kg/L) |
| • Packaging | 1 ft ³ bags, 2200lb (40ft ³) supersacks. |

Performance Characteristics

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

nextTM Sand

Silt-Sediment-Turbidity

costs less : works better

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

	nextsand	MultiMedia
Surface loading	15 gpm/ft ²	5 gpm/ft ²
Surface area req'd	1.0 ft ²	3.0 ft ²
Tank Dimensions	14" x 65"	24" x 71"
Media volume req'd	3.2 ft ³	10.8 ft ³
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 ²	5 gpm/ft ²
Surface area req'd	3.0 ft ²	9.0 ft ²
Tank Dimensions	24" x 72"	42" x 72"
Media volume req'd	9.5 ft ³	35.3 ft ³
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.

nextTM filtration technologies inc.

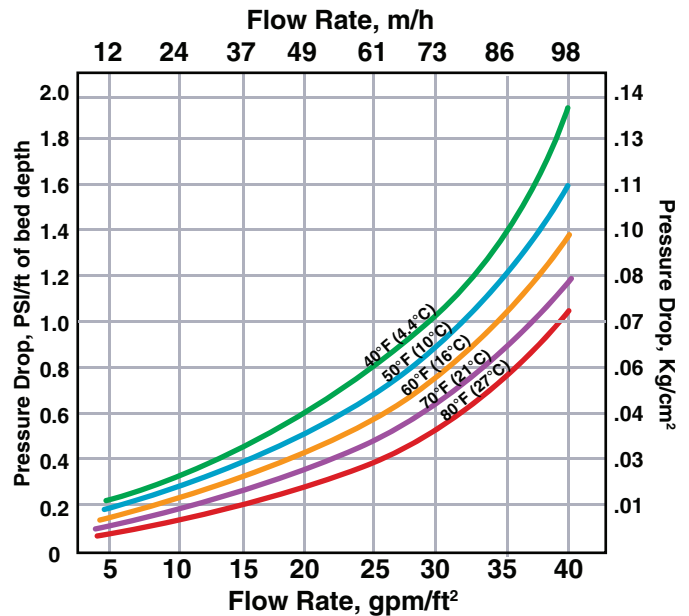
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Specifications

Operating Characteristics

Service Flow	12-20 gpm/ft ²
Backwash flow	13-22 gpm/ft ²
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 ²	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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