



PRODUCT DATA

FilPro[®]

WELL GRAVELS

PLANT: MAURICETOWN, NEW JERSEY

FilPro Well Gravel sands are produced from round and subround monocrystalline industrial quartz. Chemically inert and free of organic contaminants, they will not alter the chemistry of water-producing wells, nor distort the analytical results of effluents drawn from monitoring wells. These durable and dense sands are sized to uniformity coefficients that range from 1.35 to 2.5.

In water-producing wells, FilPro Well Gravels will increase the yield from the aquifer by increasing the permeable zone around the well screen. FilPro's ability to effectively bridge and filter finer or highly laminated formations at the interface offer drillers the option to use larger slot sizes for improved hydraulic transmission and faster development. With its superior permeability, FilPro Well Gravels will maximize hydraulic conductivity with little or no head loss through the filter pack. Excellent structural support and placement properties also make them an effective gravel pack in environmental monitoring wells and a productive leachate in sanitary landfill or leak detection systems.

All FilPro well gravel grades are processed and sized with strict adherence to statistical and quality assurance controls, and meets AWWA B-100, ANSI, and NSF-61 standards for consistently uniform and chemically inert filter media.

TYPICAL PARTICLE SIZE ANALYSIS AND PROPERTIES

(THESE DO NOT REPRESENT A SPECIFICATION)

| Mesh* | #4 | #3 | #2 | #1 | #0 | #00N | #00 | #000 |
|-----------|------|------|------|------|------|------|------|------|
| ASTM E-11 | | | | | | | | |
| 4 | 2.7 | - | - | - | - | - | - | - |
| 6 | 60.7 | 2.8 | - | - | - | - | - | - |
| 8 | 29.7 | 47.1 | 3.2 | - | - | - | - | - |
| 10 | 3.7 | 30.1 | 17.7 | 0.2 | - | - | - | - |
| 12 | 1.8 | 13.2 | 29.8 | 4.3 | - | - | - | - |
| 14 | 0.9 | 4.9 | 33.6 | 29.7 | 0.1 | - | - | - |
| 16 | - | 0.9 | 10.3 | 32.1 | 1.9 | - | - | - |
| 18 | - | 0.4 | 3.8 | 25.7 | 16.0 | - | - | - |
| 20 | - | - | 0.6 | 5.2 | 22.8 | 0.1 | - | - |
| 25 | - | - | 0.3 | 1.5 | 32.7 | 6.4 | 0.1 | - |
| 30 | - | - | - | 0.5 | 19.4 | 37.2 | 1.9 | 0.7 |
| 35 | - | - | - | 0.3 | 5.7 | 42.8 | 31.5 | - |
| 40 | - | - | - | - | 0.9 | 10.1 | 36.0 | 23.0 |
| 50 | - | - | - | - | - | 2.9 | 26.7 | 34.1 |
| 70 | - | - | - | - | - | - | 3.0 | 21.0 |
| 100 | - | - | - | - | - | - | - | 14.1 |
| 140 | - | - | - | - | - | - | - | 5.2 |
| 200 | - | - | - | - | - | - | - | 1.6 |
| 270 | - | - | - | - | - | - | - | 0.2 |
| PAN | 0.5 | 0.6 | 0.7 | 0.5 | 0.5 | 0.5 | 0.8 | 0.1 |

*Typical Mean % Retained on Individual Sieves

| | #4 | #3 | #2 | #1 | #0 | #00N | #00 | #000 |
|---|----------|------------|-------|-------|-------|-------|-------|-------|
| Recommended Screen Slot Size (in.) | 0.090 | 0.060 | 0.050 | 0.030 | 0.025 | 0.020 | 0.010 | 0.005 |
| Effective Size (mm) | 2.47 | 1.76 | 1.29 | 1.02 | 0.61 | 0.48 | 0.33 | 0.16 |
| Uniformity Coefficient | <1.8 | <1.7 | <1.6 | <1.6 | <1.6 | <1.5 | <1.6 | <2.5 |
| Bulk Density, Aerated (lb./ft. ³) | 92-95 | ASTM C-29 | | | | | | |
| Bulk Density, Compacted (lb./ft. ³) | 98-100 | ASTM C-29 | | | | | | |
| Hardness | 7.0 | Mohs Scale | | | | | | |
| Specific Gravity | 2.65 | ASTM C-128 | | | | | | |
| Grain Shape | Subround | Visual | | | | | | |
| Acid Solubility | <0.5% | API RP56 | | | | | | |

July 17, 2000

DISCLAIMER: The information set forth in this Product Data Sheet represents typical properties of the product described; the information and the typical values are not specifications. U. S. Silica Company makes no representation or warranty concerning the Products, expressed or implied, by this Product Data Sheet.

WARNING: The product contains crystalline silica - quartz, which can cause silicosis (an occupational lung disease) and lung cancer. For detailed information on the potential health effect of crystalline silica - quartz, see the U. S. Silica Company Material Safety Data Sheet.