

Date Received:  
Report Date:  
Results of samples submitted by  
Project:

Results for base gravel

**#57**

Size	Percent
> 37.5 mm	0.0%
37.5 - 25.0 mm	0.0%
25.0 - 19.0 mm	17.1%
19.0 - 12.5 mm	46.5%
12.5 - 9.5 mm	14.7%
9.5 - 6.3 mm	14.7%
6.3 - 4.75 mm	4.0%
4.75 - 4.0 mm	1.0%
4.0 - 2.8 mm	0.7%
2.8 - 2.0 mm	0.2%
2.0 - 1.0 mm	0.2%
< 1.0 mm	0.9%

Matching with topstone

**#8**

Size	Percent
>12.5 mm	0.0%
12.5 - 9.5 mm	8.1%
9.5 - 6.3 mm	39.5%
6.3 - 4.75 mm	32.1%
4.75 - 4.0 mm	8.9%
4.0 - 2.8 mm	7.1%
2.8 - 2.0 mm	1.8%
2.0 - 1.0 mm	1.1%
< 1.0 mm	1.4%

Bridging Test
For Bridging to Occur $D_{15}(\text{gravel}) \leq 8 \times D_{85}(\text{topstone})$
$D_{15}(\text{gravel}) 8.0 \leq 8 \times D_{85}(\text{topstone}) 8.9$ <b>Passes</b>

Uniformity Coefficient of Base Gravel
Cu of gravel indicates that a gravel is sufficiently uniform
$D_{90}(\text{gravel}) \div D_{15}(\text{gravel}) \leq 3.0$
$D_{90}(\text{gravel}) 21.0 \div D_{15}(\text{gravel}) 8.0 \leq 3.0$ <b>Passes</b>

Uniformity Coefficient of Topstone
Cu of gravel indicates that a gravel is sufficiently uniform
$D_{90}(\text{topstone}) \div D_{15}(\text{topstone}) \leq 3.0$
$D_{90}(\text{topstone}) 9.4 \div D_{15}(\text{topstone}) 4.2 \leq 3.0$ <b>Passes</b>

Percolation Rate
<u>Topstone</u>
59.1 in/hr (cloth)
1383.5 in/hr (screen)
<u>Basestone</u>
581.8 in/hr (cloth)
1865.5 in/hr (screen)

*\*Please see comments*

**Comments**

This topstone will bridge over this basestone. The percolation rate was tested two ways - one with cloth on the bottom of the test cylinder to simulate a cloth-wrapped pipe and the other with screening on the bottom of the cylinder to simulate unwrapped pipe. The percolation rates meet the minimum percolation rate standards set by the Synthetic Turf Council (> 14 in/hr). If additional fines are to be used with the topstone for stability, only a minimal amount should be used as the addition of fines will slow the percolation rate of the topstone and, subsequently, the entire system.