

Particle Size Analysis

Material	- Artificial Sand	Date:	- 01.10.2012
Source/Content, %	- Sandstone (Avchala)	Wt. of Sample, gr.	- 1018
Moisture, %	-		



Sieve Size, mm	Weight Retained, g	% Retained	% Passing	Spec.
22.4				
16.0				
11.2				
8.0			100.0	
4.0	48.0	4.7	95.3	
2.0	334.0	32.8	62.4	
1.0	232.0	22.8	39.6	
0.500	130.0	12.8	26.8	
0.250	100.0	9.8	17	
0.125	88.0	8.6	8.4	
<0.125	86.0	8.4		

Fineness Modulus $m = 2.6$

Artificial Sand (Sandstone-Northern Part of Tbilisi)

Concrete Recipe

Materials	#1, g	#2, g
Artificial Sand	630	520
Quartz Sand (Sachkhere)	-	110
Gravel (5-10 mm)	350	350
Gravel (10-20 mm)	340	340
Gravel (20-30 mm)	500	500
Cement	360	360
Water	168	168
Total	2348	2348



Concrete Cube Test Report

Date of the Works Cube Filling - 31.10.2012

Slump - 5 cm

Index	Recipe #1			Recipe #2		
Date of a Testing	03.11.12	07.11.12	28.11.12	03.11.12	07.11.12	28.11.12
Age of Cubes (day)	3	7	28	3	7	28
Weight in Air (g)	8052	8244	8120	8025	8158	8030
Density (kg/m ³)	2.385	2.442	2.405	2.377	2.417	2.379
Gauge Reading (kN)	188.8	522.5	1070.9	271.1	460.5	829.9
Compressive Strength (N/mm ²)	8.3	23.2	47.5	12.0	20.4	36.6

