



YTU CIVIL ENGINEERING  
CONSTRUCTION MATERIALS DIVISION

CONSTRUCTION MATERIALS

**I. LABORATORY REPORT: AGGREGATES**

Name-Surname:

Group: 1  2  3  4  5

No:

Session: 10:00-10:40  10:50-11:30  14:00-14:40  14:50-15:30

1.1. UNIT WEIGHT (TS EN 1097-3)

Calculations:

Sample	W <sub>SSD</sub> (g)	V (cm <sup>3</sup> )	$\beta$ (g/cm <sup>3</sup> )
Fine aggregate: Natural Sand			

1.2. SPECIFIC GRAVITY (PARTICLE DENSITY) (TS EN 1097-6)

Calculations:

Sample	W <sub>1</sub> SSD Aggregate (g)	W <sub>2</sub> SSD Aggregate + Water + Pycnometer (g)	W <sub>3</sub> Water + Pycnometer (g)	$\gamma$ (g/cm <sup>3</sup> )
Coarse aggregate: Crushed Stone No.1				

1.3. EFFECT OF MOISTURE



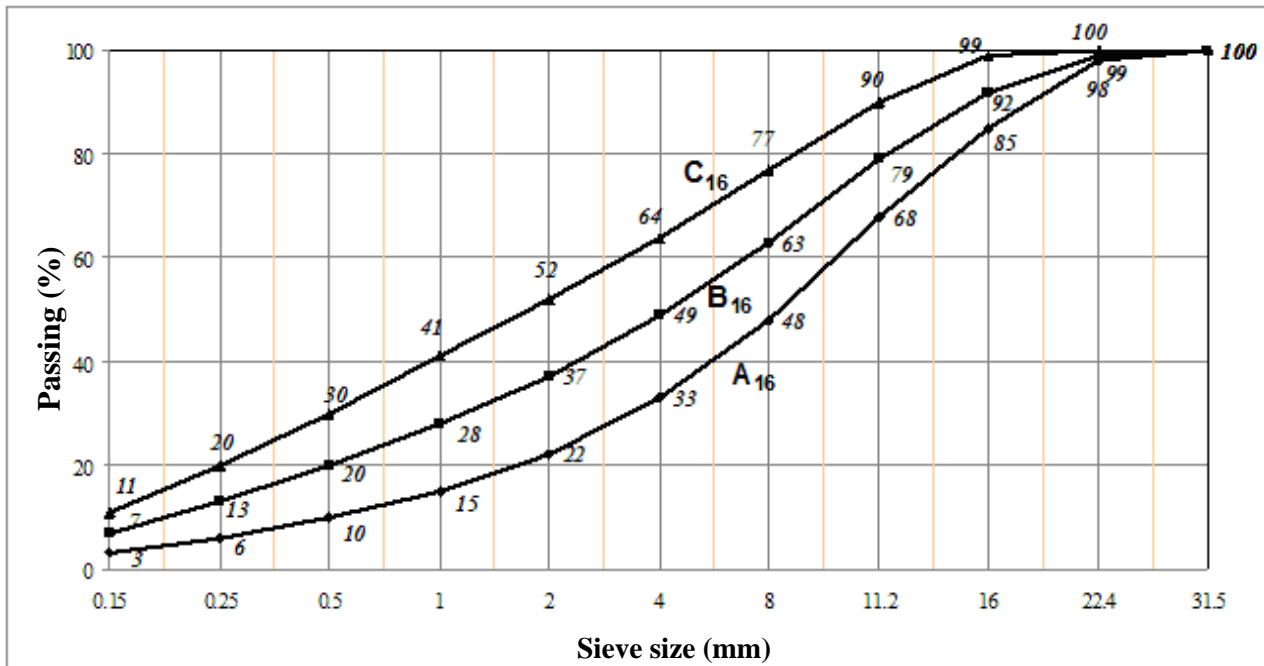
H (%)	W (g)	$\beta$ (g/cm <sup>3</sup> )	V (l)
0 (SSD)			
5			
10			

Calculations:



#### 1.4. SIEVE ANALYSIS AND PSD CURVES (TS EN 933-1)

Sieve size, $d_i$ (mm)	Fine aggregate: <i>Natural Sand</i>			Coarse aggregate: <i>Crushed stone No.1</i>			Coarse aggregate: <i>Crushed stone No.2</i>	Mixture aggregate	
	Amount of sample : 1000 g			Amount of sample: 3000 g					
	Retained (g)	Passed (g)	Passed $P_1$ (%)	Retained (g)	Passed (g)	Passed $P_2$ (%)	Passed $P_3$ (%)	Passed $P_m$ (%)	100- $P_m$ (%)
31.5	0						100		
22.4	0						100		
16	0						92		
11.2	0						53		
8	0						23		
4	0						3		
2	250						0		
1	170						0		
0.5	190						0		
0.25	140						0		
0.15	120						0		
<b>Mix ratio</b>	.....%			.....%			.....%	<b>I<sub>m,m</sub></b> = .....	



**Figure 1.1.** Reference particle size distribution curves which are given in TS 802 (March 2016) for concrete with a maximum aggregate particle size of 16 mm.