

**GOVERNMENT OF GOA  
QUALITY CONTROL LABORATORY  
WATER RESOURCES DEPARTMENT**

**Test Report No.:** WRD/Q.C./F.6-4/Aggr-T- 325,326/Lab/61/2023-24    **Dated:-** 17/05/2023.    **Laboratory:** Bicholim-Goa  
**Sand –T:-** 5392.    **Cement-T:-** 1448.    **Sub Div:** V (QC)/WRD/Bicholim Goa.  
**Sub:-** Construction of protection wall near house of Sadanand Rane to Gauresh Nagvekar at Chivar Butti in V.P. Anjuna in Siolim Constituency.  
**Ref to requisition No:-** WRD/MI/WDI/SDI/F.57/2023-24/22.    **Dated :-** 20/04/2023  
**Qty. Received:** 1 bags each    **Date of Receipt:-** 12/05/2023    **Tested on:-** 15 & 16/05/2023.    **Ref to Specification:** CPWD 2009, Vol. I&IS:4031-4-1968  
**Sample:** Sand,20mm,    **O.S. NO:-** 1207,1206,1208,1209/RK.    **Lab. Sample No :-** 7090 to 7093    **Tested by:-** Mrs. R.R. Kadam A.E.  
12.5mm size Aggr, and Cement    **R E P O R T 01 OF 01**

Sr. No.	Description of sample	Tested for	Results	Max. /Min. value permissible	Remarks
1.	<b>20.00 mm Size Aggregate:</b>	Particle size distribution:	It is single sized aggregate of 20 mm nominal size.	(Qty. rep. – --m <sup>3</sup> )	
2.	<b>12.5 mm Size Aggregate:</b>	Particle size distribution:	It is not single sized aggregate of 12.5 mm nominal size.	(Qty. rep. – -- m <sup>3</sup> )	
<b>REMARK: After blending 20 mm aggregate with 12.5 mm aggregates at the ratio of 1:1 by weight; it is satisfying the required criteria for graded aggregate of 20 mm nominal size.</b>					
3.	<b>Crushed Sand:</b> (L.S.No.7092)	i) Silt & Clay by S.A. method ii) Silt by sedimentation iii) Fineness Modulus iv) Grading Zone	:- 14.20% :- 13.46% :- 2.47% :- II	<b>(Limit of Deleterious material is 15.00% for crushed sand)</b>	
<b>REMARK: The observed results are within the permissible limits for crushed sand (Fine Aggregate) vide table 2 of IS 383: 2016(Clause 5.2.1).</b>					
4.	<b>Cement:</b> JK Super 43 Grade OPC Cement, bearing IS:269 Ordinary Portland cement, Manuf. date: W-19, M-05,Y-2023 CM/L = 0003401033 Qty. rep. –.	i) Fineness of Cement ii) Consistency of cement iii) Initial Setting Time iv) Final Setting Time	:- 1.29% :- 31.50% :- 155 minutes :- 265 minutes	----- (It should not be more than 10%) (It should be in the neighborhood of 35%) ---- (It should not be less than 30 minutes) -- (It should not be more than 600 minutes)	
To be used for - <b>REMARK: The observed results are within the permissible limit for Ordinary Portland cement.</b>					

- Copy to: 1. The Assistant Engineer, SDI, WDI, WRD, Porvorim– Goa.  
2. Copy Submitted to The Superintending Engineer, CPO, WRD, Porvorim – Goa for kind information.  
3. Copy Submitted to The Executive Engineer, WDI, WRD, Porvorim– Goa.  
4. Q.C. Lab file    5. Bill File.

**Assistant Engineer**