

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

**Test Report No.:** WRD/Q.C./F.6-4/Aggr-T- 207,208/Lab/196/2022-23    **Dated:-**22/11/2022.    **Laboratory:** Bicholim  
**Sand –T:-** 5317.    **Cement-T:-** 1387.    **Sub Div:** V (QC)/WRD/Bicholim Goa.

**Sub:-** Rejuvenation of St. Inez nallah-Improvement to Hydrodynamic, Water Quality and Stabilization of banks a Project under Smart City Mission.

**Ref to requisition No:-** SDIV/WDI/WRD/F.38/22-23/517    **Dated :-** 08/11/2022

**Qty. Received:** 1 bags each    **Date of Receipt:-** 13/11/2022    **Tested on:-** 16,17,18 & 19/11/2022    **Ref to Specification:** CPWD 2009, Vol. I&IS:4031-4-1968

**Sample:**Sand,20mm, **O.S. NO:-** 9481,9482,9485 & 9478/SS    **Lab. Sample No.:-** 5386 to 5389    **Tested by:-** Mrs. S. B. Naik Shirodkar J.E.  
12.5mm size Aggr, Sand, and Cement

**R E P O R T 01 O F 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.5388)	i) Silt & Clay by S.A. method ii) Silt by sedimentation iii) Fineness Modulus iv) Grading Zone	: - 13.700% : - 14.28% : - 2.48% : - 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 Cement, bearing IS:269 Ordinary Portland cement, Manuf. date: W-43, M-10, Y-2022 CM/L = 0003401033 Qty. rep. –.	i) Fineness of Cement ii) Consistency of cement iii) Initial Setting Time iv) Final Setting Time	: - 1.36% : - 31.50% : - 160 minutes : - 325 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, SDIV,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.

**Junior Engineer**

**Assistant Engineer**