

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

**Test Report No.:** WRD/Q.C./ F.6-4 /Aggr-T-9913,9914 /Lab/212/2021-22 **Dated:** 22/ 11/2021. **Laboratory:** Bicholim  
**Sand –T:5197,5198 Laterite-T:0448 Cement-T:1294 Sub Div:** V(QC)/W.D.VIII/Bicholim Goa.

**Sub:** Construction of Protection wall for the Bund of Paddy field from Luiza Vaz house to cantorlem vau at Gavana, chodan in Mayem constituency.

**Ref to requisition No.:** -F. /WRD/WDVI/SDI/W.236/21-22/320 **Dated:** 02/11/2021.

**Qty. Received:** 1 bags each **Date of Receipt:** 11/11/2021 **Tested on:** 16,17 & 18 /11/2021 **Ref to Specification:** CPWD 2009, Vol. I&IS:4031-4-1968

**Sample:** Sand, 20mm, **O.S. No.** 7083,7084,7086,7087,7092 & 7085 /SS **Lab. Sample No.:** 2348 To 2353 **Tested by:** Mrs. Shirodkar. JE.  
 12.5mm size aggrt., Laterite Stone, Cement

**R E P O R T 01 OF 02**

Sr. No.	Description of sample	Tested for	Results	Max. /Min. value permissible	Remark
1.	<b>20 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:</b> After blending 20 mm aggregate with 12.5 mm aggregates at the ratio of <b>1:1</b> by weight; it is satisfying therequired criteria for graded aggregate of 20 mm nominal size.					
3.	<b>Coarse Sand:</b> (L.S.No.2350)	i) Silt & Clay by S.A. method ii) Silt by sedimentation iii) Fineness Modulus iv) Grading Zone	: - 4.40% : - 5.40% : - 2.72% : - II	<b>4. Fine Sand:</b> (L.S.No.2351)	i) Silt & Clay by S.A. method : - 4.80% ii) Silt by sedimentation : - 5.20 iii) Fineness Modulus : - 1.74% iv) Grading Zone : - IV
<b>REMARK:</b> The observed results are within the permissible limits of the coarse and Fine sand.					
5.	<b>Laterite stone</b>	A) Compressive strength test: -	i) 41.65 Kg /cm <sup>2</sup> ii) 44.59 Kg /cm <sup>2</sup> iii) 40.77 Kg /cm <sup>2</sup> Avg. <b>42.33</b> Kg/cm <sup>2</sup>	<b>35.00kg/cm<sup>2</sup></b>	
<b>Remark:</b> - The average Compressive strength achieved is <b>20.96% More</b> than the specified value of <b>35.00 Kg/cm<sup>2</sup></b> .					
		B) Water Absorption Test.	i) 10.80 % ii) 10.60 % iii) 11.00 % Avg. 10.80 %	<b>12.00 %</b>	
<b>Remark:</b> The average water absorption is 10.80%, less than the maximum permissible limit of <b>12.00 %</b> .					

Junior Engineer

Assistant Engineer

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**Laboratory:** Bicholim

**Sand –T: 5197,5198 Laterite-T: 0448 Cement-1294**

**Sub Div: V(QC)/W.D.VIII/Bicholim Goa.**

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**R E P O R T 02 OF 02**

Sr. No.	Description of sample	Tested for	Results	Max. /Min. value permissible	Remark
6.	<b>Cement:</b> J.K Cement, bearing IS:269 Ordinary Portland cement, Manuf. date: W- 43 M-10 Year: 2021 CM/L =0003401033 Qty. rep. – ____ --. To be used for –		i) Fineness of Cement ii) Consistency of cement iii) Initial Setting Time iv) Final Setting Time	: 1.16% ----- (It should not be more than 10%) : 31.50% (It should be in the neighborhood of 35%) : 165 minutes ---- (It should not be less than 30 minutes) : 330 minutes -- (It should not be more than 600 minutes)	

**REMARK: The observed results are within the permissible limit for Ordinary Portland cement.**

Copy to: 1. The Assistant Engineer, SDI, WDVI, WRD, Bicholim – Goa.

2. Copy Submitted to The Superintending Engineer, CPO, WRD, Sinchai Bhavan Porvorim – Goa for kind Information.

3. Copy Submitted to The Executive Engineer, W.D.VI, WRD, Bicholim – Goa

4. Q.C. Lab file 5. Bill File.

**Junior Engineer**

**Assistant Engineer**