

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

Test Report No.: WRD/Q.C./F.6-4/Aggr-T- 9923,9924/Lab/220/2021-22 **Dated:** 02/12/2021.

Laboratory: Bicholim

Coarse Sand –T: 5206, 5207 **Cement-T:**1299, **Laterite Stone-T:**0449

Sub Div: V (QC)/WRD/Bicholim Goa.

Sub:-Construction of flood protection wall at Tariwada in Ward No. 06 of Village Madapai, Marcel, in V.P. Tivrem Orgao in Priol Constituency of Ponda Taluka.

Ref to requisition No:-WRD/WDXI/SDIV /F.CF/304/2021-22 **Dated:** 22/09/2021.

Qty. Received: 1 bags each **Date of Receipt:** 23/11/2021 **Tested on:** 26,27,29 & 30/11/2021 **Ref to Specification:** CPWD 2009, Vol. I&IS:4031-4-1968

Sample:Sand,20mm, **O.S. N:-**7123,7124,7128,7120,7145& 7144/SS **Lab. Sample No.:** 2408 To 2413 **Tested by:** Mrs. Shirodkar.JE.

12.5mm size aggrt., Sand, Cement, Laterite Stone.

R E P O R T 01 OF 02

Sr. No.	Description of sample	Tested for	Results	Max. /Min. value permissible	Remarks
1.	20 mm Size Aggregate:	Particle size distribution:	It is single sized aggregate of 20 mm nominal size.	(Qty. rep. – --m ³)	
2.	12.5 mm Size Aggregate:	Particle size distribution:	It is not single sized aggregate of 12.5 mm nominal size.	(Qty. rep. – -- m ³)	
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.					
3.	Coarse Sand: (L.S.No.2410)	i) Silt & Clay by S.A. method ii) Silt by sedimentation iii) Fineness Modulus iv) Grading Zone	: - 4.60% : - 4.16% : - 3.574% : - I		
To be used for----. REMARK: The observed results are within the permissible limits of the Coarse Sand.					
4.	Ultra Tech Cement: Ultra Tech Cement 43 grade,bearing IS:269 Ordinary Portland cement, Manuf. date: W- 40, M- 10, Year-2021 CM/L =7171769 Qty. rep. –.	i) Fineness of Cement ii) Consistency of cement iii) Initial Setting Time iv) Final Setting Time	: 1.07% : 31.50% : 170 minutes : 295minutes	----- (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 C.C 1:2:4 –. REMARK: The observed results are within the permissible limit for Ordinary Portland cement.					

Junior Engineer

Assistant Engineer

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R E P O R T 02 OF 02

6	<u>Laterite stone</u>	A) Compressive strength test: -	i) 49.83 Kg /cm ²	35.00kg/cm²
			ii) 43.03 Kg /cm ²	
			iii) 46.03 Kg /cm ²	
			Avg. 46.29 Kg/cm ²	

Remark: - The average Compressive strength achieved is **32.27%More** than the specified value of **35.00 Kg/cm²**.

B) Water Absorption Test.	i) 8.00 %	12.00 %
	ii) 11.00 %	
	iii) 10.40 %	
	Avg 9.80 %	

Remark: The average water absorption is **9.80 %**,less than the maximum permissible limit of **12.00%**

5.	<u>Crushed Sand:</u> (L.S.No.2413)	i) Silt & Clay by S.A. method	: -	14.20%(Limit of Deleterious material is 15.00% for crushed sand)
		ii) Silt by sedimentation	: -	13.88%
		iii) Fineness Modulus	: -	2.998
		iv) Grading Zone	: -	I

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).

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- Copy to: 1. The Assistant Engineer, SDIV, WDXI,WRD, Ponda– Goa.
2. Copy Submitted to The Superintending Engineer, CPO, WRD, Porvorim – Goa for kind information.
3. Copy Submitted to The Executive Engineer, W.D. XI, WRD,Ravonfond, Navelim Salcete – Goa
4. Q.C. Lab file 5. Bill File.

Junior Engineer

Assistant Engineer