GOVERNMENT OF GOA
QUALITY CONTROL LABORATORY
WATER RESOURCES DFEPARTMENT

Test Report No.: WRD/Q.C./F.6-4/Aggr-T- 9871,9872 /Lab/150/2021-22 Dated: 12/ 07/2021. **Laboratory:** Bicholim
Sand –T: 5169,5170. Cement-1273. Laterite-T-0445 **Sub Div: V (QC)/WRD/Bicholim Goa.**
Sub:- Construction and Improvement of Irrigation tanks in the fields at Ambye, Candoal in Priol Constituency.
Ref to requisition No: WRD/WDXI/SDIV/F.CF/56/2021-22 Dated: 03/05/2021.
Qty. Received: 1 bags each **Date of Receipt**: 22/06/2021 **Tested on**: 23,25,26,28,29/06/2021 **Ref to Specification:** CPWD 2009, Vol. I&IS:4031-4-1968
Sample: Sand,20mm, **O.S. No.**6594,6595,6617,6623,6678,6679/SS **Lab. Sample No**.: 1963 to 1968 **Tested by**: Mrs. Shirodkar.JE.
12.5mm size aggrt., Cement,Laterite **R E P O RT 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 therequired criteria for graded aggregate of 20 mm nominal size.			
3.	**Sand:** (L.S.No.1965)	i) Silt & Clay by S.A. method	: - 5.20%		
		ii) Silt by sedimentation	: - 4.65%		
		iii) Fineness Modulus	: - 2.30%		
		iv) Grading Zone	: - II		
		REMARK: The observed results are within the permissible limits of the coarse sand.			
4	**Cement:** JK Cement, bearing IS:269 Ordinary Portland cement, Manuf. date: W/M-Invisisble Year'2021. CM/L = Qty. rep. –. To be used for – 1:2:4 mix concrete	i)Fineness of Cement	: 1.21% ---------- (It should not be more than 10%)		
		ii)Consistency of cement	: 31.50% (It should be in the neighborhood of 35%)		
		iii) Initial Setting Time	: 180 minutes ---- (It should not be less than 30 minutes)		
		iv) Final Setting Time	: 315 minutes -- (It should not be more than 600 minutes)		
		REMARK: The observed results are within the permissible limit for Ordinary Portland cement.			

Junior Engineer **Assistant Engineer**

R E P O RT 01 OF 02

Sr. No.	Description of sample	Tested for	Results	Max. /Min. value permissible	Remarks
5.	**Laterite stone**	A) Compressive strength test: -	i) 39.45 Kg /cm^2	**35.00kg/cm^2**	
			ii) 50.96 Kg /cm^2		
			iii) 37.26 Kg /cm^2		
			Avg. **42.55** Kg/cm^2		
		Remark: - The average Compressive strength achieved is **21.59 %More** thanthe specified value of **35** Kg/cm^2.			
		B) Water Absorption Test.	i) 11.00 %		
			ii) 10.20 %		
			iii) 9.40 %		
			Avg. **10.20 %**	**12.00 %**	
		Remark: The average water absorption is **10.20 %,**less thanthe maximum permissible limit of **12%**.			
6.	**Crushed Sand:** (L.S.No.1968)	i) Silt & Clay by S.A. method	: - 10.60%		
		ii) Silt by sedimentation	: - 9.52%	**(Limit of Deleterious material is 15.00% for crushed sand)**	
		iii) Fineness Modulus	: - 2.55		
		iv) Grading Zone	: - II		

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).

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**