

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

Test Report No.: WRD/Q.C./F.6-4/Aggr-T- 9915,9916/Lab/213/2021-22 Dated: 23/ 11/2021.

Laboratory: Bicholim

Sand –T:5199. Cement-1295

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

Sub: Construction of barrage and up gradation of Raw water pumping station at Ganjem on Madei River for augmentation of Raw for OPA Water Works.

Part II:- Construction of Bank protection wall for upstream of barrage at Ganjem.

Ref to requisition No:- MIN/WDVI/WRD/SDII/f.62/21-22/321 Dated: 10/11/2021.

Qty. Received: 1 bags each **Date of Receipt:** 15/11/2021 **Tested on:** 17,18 & 19 /11/2021 **Ref to Specification:** CPWD 2009, Vol. I&IS:4031-4-1968

Sample: Sand, 20mm, **O.S. No.** 7088,7089,7094 & 7091/SS **Lab. Sample No.:** 2358 To 2361 **Tested by:** Mrs. Shirodkar.JE.

12.5mm size aggrt., Cement

R E P O R T 01 O F 01

Sr. No.	Description of sample	Tested for	Results	Max. /Min. value permissible	Remark
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.	Crushed Sand: (L.S.No.2360)	i) Silt & Clay by S.A. method ii) Silt by sedimentation iii) Fineness Modulus iv) Grading Zone	: - 10.60% : - 13.51% : - 2.378% : - II	(Limit of Deleterious material is 15.00% for crushed sand)	
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).					
4.	Cement: Dalmia Cement, bearing IS:269 Ordinary Portland cement, Manuf. date: W- M- 10 year-2021 CM/L =269 - 8006936289 Qty. rep. – ____ --.	i) Fineness of Cement ii) Consistency of cement iii) Initial Setting Time iv) Final Setting Time	: 1.26% : 33.00% : 150 minutes : 290 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)	
REMARK: The observed results are within the permissible limit for Ordinary Portland cement.					

Copy to: 1. The Assistant Engineer, SDII,WDVI,WRD, Valpoi – Sattari – Goa.

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

3. Copy Submitted to The Executive Engineer,WDVI,WRD,Bicholim – Goa

4. Q.C. Lab file 5. Bill

Junior Engineer

Assistant Engineer