

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

Test Report No.: WRD/Q.C./F.6-4/ Aggr -T- 9707, 9708 /Lab/ 177 /2020-21

Dated: 28/ 12 / 2020.

Laboratory: Bicholim

Sand –T: 5074 , Cement: 1206. Laterite -T- 0440

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

Sub: Improvement to waterways at Vadanchi Dhat Shivolkarwada mulgao in Bicholim Goa.

Ref to requisition No: SDIII/WDVI/WRD/F. 36/2020-21/134 Dated: 14/12/2020.

Qty. Received: 1 bags each **Date of Receipt:** 22/12/2020 **Tested on:** 24,25 & 26/12/2020 **Ref to Specification:** CPWD 2009, Vol. I & IS:4031-4-1968

Sample: Sand , 20mm, **O.S. No.** 4461,4462,4471,4472 & 4463/SS **Lab. Sample No.:** 9802 To 9806 **Tested by:** Mrs. S. B. Naik Shirodkar.JE.
12.5mm size aggrt, & cement.

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: 1. After blending 20 mm aggregate with 12.5 mm aggregates at the ratio of 1:2 by weight; it is satisfying the required criteria for graded aggregate of 20 mm nominal size. | | | | | |
| 3. | Sand: (L.S.No.9804) | i) Silt & Clay by S.A. method ii) Silt by sedimentation iii) Fineness Modulus iv) Grading Zone | : - 5.20% : - 5.55% : - 2.22 : - III | | |
| REMARK: The observed results are within the permissible limits of the coarse sand. | | | | | |
| 4. | Cement: J.K.Cement, bearing IS:269 Ordinary Portland cement, Manuf. date: Week 49, Month 12, Year'2020. 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 % : 32.50% : 190 minutes : 315 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. | | | | | |

Junior Engineer

Assistant Engineer

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R E P O R T 02 OF 02

5. Laterite stone

A) Compressive strength test: -

| | |
|--------------------------------------|-------------------------------|
| i) 12.90 Kg /cm ² | 35.00kg/cm² |
| ii) 17.77 Kg /cm ² | |
| iii) <u>25.80 Kg /cm²</u> | |
| Avg. 18.82 Kg/cm² | |

Remark: - The average Compressive strength achieved is (-) **46.21 % less** than the specified value of **35 Kg/cm²**.

B) Water Absorption Test.

| | |
|---------------------|----------------|
| i) 12.00 % | |
| ii) 11.00 % | |
| iii) <u>13.00 %</u> | |
| Avg. 12.00 % | 12.00 % |

Remark: The average water absorption is **12.00 %**, the maximum permissible limit of **12% .**

Copy to: 1. The Assistant Engineer, SDIII, WDVI,WRD, Mulgao – Goa.

2. Copy Submitted to The Superintending Engineer, CPO, WRD, 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