

# MATERIAL TESTING DIVISION

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MTD/ Plast Fibre/150/2008

Date : 29/1/2008.

To,

Tashi India Limited,  
Imambada Road,  
Nagpur - 440 018.

**Sub :- Testing of Plast Fibre for M-15 grade concrete.**

Ref :- Your letter No TIL/WRD/ 12120 // dt. 12/12/07.

Sir,

With reference to above letter, this Institute has performed M-15 grade concrete Testing using Plast Fibre ( Fibrillated Polypropylene Fibre ), the results of the tests are enclosed herewith . From results it is observed that due to cracks arresting properties of fibre it is better suited for crack control in canal lining, tunnel lining. The following mix design is used for study.

- |    |                       |   |                            |
|----|-----------------------|---|----------------------------|
| 1) | Cement                | - | 330 Kg / m <sup>3</sup>    |
| 2) | Water                 | - | 190 Litre / m <sup>3</sup> |
| 3) | Sand                  | - | 707 Kg / m <sup>3</sup>    |
| 4) | Aggregate             | - |                            |
|    | i.) 20 mm             | - | 729 Kg / m <sup>3</sup>    |
|    | ii.) 10 mm            | - | 486 Kg / m <sup>3</sup>    |
| 5) | Absorption correction | - |                            |
|    | i.) 20 mm             | - | 12.50 Litre / c.c.m        |
|    | ii.) 10 mm            | - | 7.6 Litre / c.c.m          |

( D.P. Kulkarni )  
Scientific Research Officer

**MATERIAL TESTING DIVISION, M.E.R.I. NASHIK-4.**

The results of M-15 grade Concrete @ 28 days ( Control & with Use of Plast Fibres )

Date: /1/2008

Sr No	Grade of Concrete	Compressive Strength @ 28 days Kg/cm <sup>2</sup>	Split Tensile Strength	Flexural Strength	Modulus of Elasticity Kg/cm <sup>2</sup>	Permeability	Remarks.
			Kg/cm <sup>2</sup> % Increase with Control Mix.	Kg/cm <sup>2</sup> % Increase with Control Mix.			
1	M-15 (Control)	181	9.60 ----- -----	20 ----- -----	1.7 x 10 <sup>5</sup>	Pressure applied up to 10 Kg/cm <sup>2</sup> no percolation is observed. #	
2	M-15 (12 mm fibre)	181	10.81 ----- 11 %	22 ----- 10%	2 x 10 <sup>5</sup>		
3	M-15 (20 mm fibre)	181	11.00 ----- 14 %	23 ----- 15 %	2 x 10 <sup>5</sup>		

*D.P. Kulkarni*

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