



IS : 4985



CM/L : 2362145

IS : 12818



CM/L : 6229668

**POLYTOUGH & BHAVANI PVC PIPES**

**BHAVANI**

**uPVC PIPES & BOREWELL CASING PIPES**

**Quality is our mission**



IS : 4985



**POLYTOUGH**

IS : 12818



**BHAVANI**

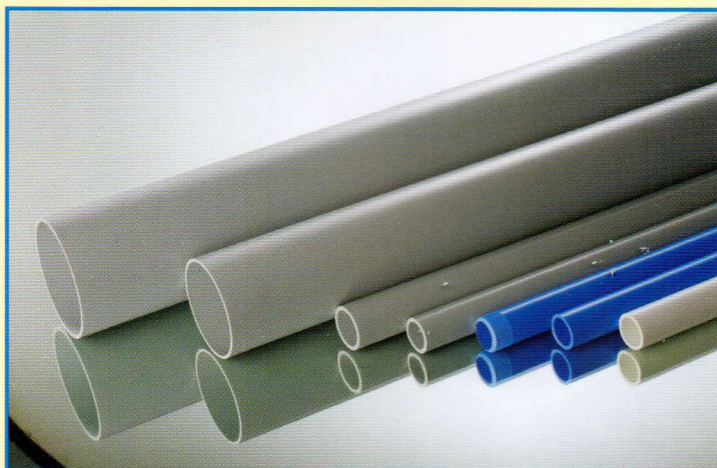
**PALAR**



**POLYTOUGH TUBES LTD.** incorporated in the year 1989, is a leading manufacturer of UPVC Rigid Pipes. The company's factory is located in Maduranthagam in Kancheepuram Dist near Chennai with imported and Indian extrusion systems.

Since inception the Company has introduced innovative concepts in thermoplastics for Residential, Agricultural and Industrial applications. Polytough Tubes's ongoing investments in plant, machinery and technology, combined with in-house process and product innovations, has created a culture of continual product and plant development.

The company's products have been tested extensively and certified by various test houses. The products have been certified as confirming to the specification of Bureau of Indian Standards : IS:4985 and IS:12818. Polytough Tubes also produces PVC Pipes as per ASTM D1785.



## ► Features

1. Only first quality Resin is used.
2. Uniform thickness & quality.
3. Wide network of dealers all over Southern India.
4. Low transportation cost, ease of handling.
5. uPVC pipes have smooth surface, which reduces pressure losses and conserve electricity.
6. The requirement of solvent cement for pipeline is reduced.
7. Equally good for plumbing and irrigation.
8. Perfect adherence to size and specification standards.

## ► Application

Drinking Water, Irrigation Systems, Building Industry (Plumbing and Rain Water Drain) Bore Wells and Tube Wells, Drainage & Sewage Systems, Salt Water Projects, Industrial Effluent Disposal, Electrical Conduits, Telephone Ducting & Insulation, Sprinkler System and Drip Irrigation.

## ► Products

1. **Agriculture selfit uPVC pipes** ranging from 20mm to 315mm
2. **Plumbing uPVC plain end pipes** ranging from 20mm to 50mm with standard 15 kgf/cm<sup>2</sup> working pressure class
3. **ASTM uPVC pipes** ranging from ½" to 10" in schedule 40 & schedule 80 series.
4. **Casing pipes** ranging from 10mm (4") to 250mm (10") in both CS and CM.



## ► Dimension of uPVC Pipes for Potable Water Supplies

(All Dimensions in Millimeters)

IS 4985 : 2000				Wall Thickness for Working Pressure					
Outer Diameter	Tolerance on Outer Diameter	Class - 1 2.5 kg / Cm <sup>2</sup>		Class - 2 4 Kg / Cm <sup>2</sup>		Class - 3 6 Kg / Cm <sup>2</sup>		Class - 5 10 Kg / Cm <sup>2</sup>	
		Min	Max	Min	Max	Min	Max	Min	Max
20	+0.3	-	-	-	-	-	-	1.1	1.5
25	+0.3	-	-	-	-	-	-	1.4	1.8
32	+0.3	-	-	-	-	-	-	1.8	2.2
40	+0.3	-	-	-	-	1.4	1.8	2.2	2.7
50	+0.3	-	-	-	-	1.7	2.1	2.8	3.3
63	+0.3	-	-	1.5	1.9	2.2	2.7	3.5	4.1
75	+0.3	-	-	1.8	2.2	2.6	3.1	4.2	4.9
90	+0.3	1.3	1.7	2.1	2.6	3.1	3.7	5.0	5.7
110	+0.4	1.6	2.0	2.5	3.0	3.7	4.3	6.1	7.1
140	+0.5	2.0	2.4	3.2	3.8	4.8	5.5	7.7	8.9
160	+0.5	2.3	2.8	3.7	4.3	5.4	6.2	8.8	10.2
180	+0.6	2.6	3.1	4.2	4.9	6.1	7.1	9.9	11.4
200	+0.6	2.9	3.4	4.6	5.3	6.8	7.9	11.0	12.7
225	+0.7	3.3	3.9	5.2	6.0	7.6	8.8	12.4	14.3
250	+0.8	3.6	4.2	5.7	6.5	8.5	9.8	13.8	15.9
280	+0.9	4.1	4.8	6.4	7.4	9.5	11.0	15.4	17.8
315	+1.0	4.6	5.3	7.2	8.3	10.7	12.4	17.3	19.9

## ► Dimension of uPVC Plain End Plumbing Pipes

Sl. No	Nominal - Pipe Size	Mean - Outside Diameter		Wall Thickness	
		Min	Max	Min	Max
1	20	20.0	20.3	2.8	3.3
2	25	25.0	25.3	2.9	3.4
3	32	32.0	32.3	3.4	3.9
4	40	40.0	40.3	3.6	4.2
5	50	50.0	50.3	3.7	4.3

## ► Dimension of Casing Pipes for Borewells IS 12818 : 2010

Sl. No	Nominal Size		Outer Diameter		Casing Shallow (CS) (Depth upto 80 mtr)		Casing Medium (CM) Depth upto 80-250 mtr	
	inch	mm	inch	mm				
1	4	DN 100	113.0	113.3	-	-	5.0	5.7
2	5	DN 125	140.0	140.4	-	-	6.5	7.3
3	6	DN 150	165.0	165.4	5.7	6.5	7.5	8.5
4	7	DN 175	200.0	200.5	7.0	7.8	8.8	9.8
5	8	DN 200	225.0	225.5	7.6	8.8	10.0	11.2
6	10	DN 250	280.0	280.5	9.6	11.0	12.5	14.0



## ▶ ASTM PVC Pipes - As per ASTM D-1785

Sl. No	Pipe Size (in.)	Outer Dia (mm)	Schedule 40		Schedule 80	
			Wall Thickness (mm)	working Pressure at 23°C (kg/cm <sup>2</sup> )	Wall Thickness (mm)	working Pressure at 23°C (kg/cm <sup>2</sup> )
1	½	21.34 ± 0.10	2.77 + 0.51	42.19	3.73 + 0.51	59.77
2	¾	26.67 ± 0.10	2.87 + 0.51	33.75	3.91 + 0.51	48.55
3	1	33.40 ± 0.13	3.38 + 0.51	31.62	4.55 + 0.53	44.27
4	1¼	42.16 ± 0.13	3.56 + 0.51	26.01	4.85 + 0.58	36.62
5	1½	48.26 ± 0.15	3.68 + 0.51	23.25	5.08 + 0.61	33.04
6	2	60.32 ± 0.15	3.91 + 0.51	19.69	5.54 + 0.66	28.15
7	2½	73.02 ± 0.18	5.16 + 0.61	21.11	7.01 + 0.84	29.58
8	3	88.90 ± 0.20	5.49 + 0.66	18.26	7.62 + 0.91	26.01
9	4	114.30 ± 0.23	6.02 + 0.71	15.50	8.56 + 1.02	22.54
10	5	141.30 ± 0.25	6.55 + 0.79	13.10	9.52 + 1.14	20.15
11	6	168.28 ± 0.28	7.11 + 0.86	12.65	10.97 + 1.32	19.69
12	8	219.08 ± 0.38	8.18 + 0.99	11.22	12.70 + 1.52	17.54

### Certificates of Approval THE CENTRAL INSTITUTE OF PLASTICS ENGINEERING & TECHNOLOGY (CIPET)

सेंट्रल इन्स्टीट्यूट ऑफ प्लास्टिक्स इंजीनियरिंग एण्ड टेक्नॉलॉजी  
(CENTRAL INSTITUTE OF PLASTICS ENGINEERING & TECHNOLOGY)  
Charapally, Hyderabad - 500 051

**Test Certificate**  
No.: 0124866 Page 1 of 2 Date: 15.09.2014

Issued to: M/s. Polytoough Tubes Limited,  
204, Kalamathakuram Village,  
Madhavaram Taluk,  
Kanchipuram Dist. - 603 106,  
Tamil Nadu.

Ref: Your letter no. NTD dated 21.08.2014

TEST REPORT AS PER: IS 12121-2010 (Pt 4.10.11) REPORT NO: 14029487

PART A - PARTICULARS OF SAMPLE SUBMITTED

a) Name of the Sample	UPVC Casing Pipes
b) Grade/Variety/Type/Size/Class	UN 125 mm (1") CM
c) Declared values, if any	Nil
d) Code No.	Nil
e) Batch No. and Date of Manufacture	14072211 & Nil
f) Quantity	1 mtr x 3 nos
g) Mode of Packing	HDPE bag
h) Seal	Nil
i) Any other information	Sample received on 25.08.2014
j) Date of initiation of testing	01.09.2014
k) Date of completion of testing	15.09.2014

PART B - SUPPLEMENTARY INFORMATION

a) Reference to sampling Procedure	Nil
b) Supporting documents for the measurement values and result derived	Nil
c) Deviation from the test method as prescribed in relevant work instructions, if any	Nil

TECHNICAL MANAGER: [Signature]  
QUALITY MANAGER AUTHORIZED SIGNATORY: [Signature]

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**Test Certificate**  
No.: 0124865 Page 2 of 2

TEST RESULTS  
(As per IS 4993:2000 (Pt 1221) (Pt 4.10.11))

SNO	Clause	Test	Specified Requirement	Results obtained
01	10.3	Effect on water	Max ppm by Mass	
		Lead as Pb ppm (First extraction)	1.0	0.0196
		Lead as Pb ppm (Third extraction)	0.05	0.0083
		Chlorides as Cl <sub>2</sub> ppm (All three extractions)	0.02	0.0078
		Calcium as Ca ppm (All three extractions)	0.01	Not detected
		Magnesium as Mg ppm (All three extractions)	0.001	Not detected
		Other toxic substances such as "6-n-octyltin-o-2" bis (non-octyl non-oxo-oxo-2" and "bis-oxo-2" (Third extraction)	0.01	Not detected

PART D: REMARKS: Nil

NB: 1. The results related only to items sampled tested.  
2. The report shall not be reproduced in full part without written approval of the laboratory.

TECHNICAL MANAGER: [Signature]  
QUALITY MANAGER AUTHORIZED SIGNATORY: [Signature]

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No.: 0124865 Page 1 of 2 Date: 15.09.2014

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Kanchipuram Dist. - 603 106,  
Tamil Nadu.

Ref: Your letter no. NTD dated 21.08.2014

TEST REPORT AS PER: IS 4993:2000 (Pt 1221) (Pt 4.10.11) REPORT NO: 14029487

PART A - PARTICULARS OF SAMPLE SUBMITTED

a) Name of the Sample	UPVC Pipes
b) Grade/Variety/Type/Size/Class	110 mm, Class 2
c) Declared values, if any	Nil
d) Code No.	Nil
e) Batch No. and Date of Manufacture	14081514 & Nil
f) Quantity	1 mtr x 3 nos
g) Mode of Packing	HDPE bag
h) Seal	Nil
i) Any other information	Sample received on 25.08.2014
j) Date of initiation of testing	01.09.2014
k) Date of completion of testing	15.09.2014

PART B - SUPPLEMENTARY INFORMATION

a) Reference to sampling Procedure	Nil
b) Supporting documents for the measurement values and result derived	Nil
c) Deviation from the test method as prescribed in relevant work instructions, if any	Nil

TECHNICAL MANAGER: [Signature]  
QUALITY MANAGER AUTHORIZED SIGNATORY: [Signature]

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No.: 0124865 Page 2 of 2

TEST RESULTS  
(As per IS 12121-2010 (Pt 4.10.11))

SNO	Clause	Test	Specified Requirement	Results obtained
01	10.3	Effect on water	Max ppm by Mass	
		Lead as Pb ppm (First extraction)	1.0	0.0178
		Lead as Pb ppm (Third extraction)	0.05	0.0086
		Chlorides as Cl <sub>2</sub> ppm (All three extractions)	0.02	0.0078
		Calcium as Ca ppm (All three extractions)	0.01	Not detected
		Magnesium as Mg ppm (All three extractions)	0.001	Not detected
		Other toxic substances such as "6-n-octyltin-o-2" bis (non-octyl non-oxo-oxo-2" and "bis-oxo-2" (Third extraction)	0.01	Not detected

PART D: REMARKS: Nil

NB: 1. The results related only to items sampled tested.  
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TECHNICAL MANAGER: [Signature]  
QUALITY MANAGER AUTHORIZED SIGNATORY: [Signature]



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