

**National Pipe Products**  
**# 14 & 15(335/25-14)**  
**Magadi Road, Herohalli,**  
**YeshwantpurHobli, Sunkadakatte,**  
**Bangalore - 560091**

**V I PISI MARKED FRLS PVC CONDUIT**

**TECHNICAL DATA SHEET**

SL No	PROPERTY	DATA																																																						
1	Make	<b>V I P ISI MARKED RIGID PVC FRLS CONDUITS</b>																																																						
2	Applied Standard	IS:9537 (Part III) 1983																																																						
3	B I S Licence #	<b>CM/L - 6200014982</b>																																																						
4	Dimensions	<table border="1"> <thead> <tr> <th>Nominal Size</th> <th>Outside Diameter</th> <th>Tolerance on OD</th> <th colspan="3">Inside Diameter (Min) in mm</th> </tr> <tr> <th>mm</th> <th>mm</th> <th>mm</th> <th>LIGHT</th> <th>MEDIUM</th> <th>HEAVY</th> </tr> </thead> <tbody> <tr> <td><b>16</b></td> <td>16</td> <td>-0.3</td> <td>13.7</td> <td>13.0</td> <td>12.2</td> </tr> <tr> <td><b>19(Non Std)</b></td> <td>19</td> <td>-0.3</td> <td>16.4</td> <td>15.9</td> <td>14.8</td> </tr> <tr> <td><b>20</b></td> <td>20</td> <td>-0.3</td> <td>17.4</td> <td>16.9</td> <td>15.8</td> </tr> <tr> <td><b>25</b></td> <td>25</td> <td>-0.4</td> <td>22.1</td> <td>21.4</td> <td>20.6</td> </tr> <tr> <td><b>32</b></td> <td>32</td> <td>-0.4</td> <td>28.6</td> <td>27.8</td> <td>26.6</td> </tr> <tr> <td><b>40</b></td> <td>40</td> <td>-0.4</td> <td>35.8</td> <td>35.4</td> <td>34.4</td> </tr> <tr> <td><b>50</b></td> <td>50</td> <td>-0.5</td> <td>45.1</td> <td>44.3</td> <td>43.2</td> </tr> </tbody> </table>	Nominal Size	Outside Diameter	Tolerance on OD	Inside Diameter (Min) in mm			mm	mm	mm	LIGHT	MEDIUM	HEAVY	<b>16</b>	16	-0.3	13.7	13.0	12.2	<b>19(Non Std)</b>	19	-0.3	16.4	15.9	14.8	<b>20</b>	20	-0.3	17.4	16.9	15.8	<b>25</b>	25	-0.4	22.1	21.4	20.6	<b>32</b>	32	-0.4	28.6	27.8	26.6	<b>40</b>	40	-0.4	35.8	35.4	34.4	<b>50</b>	50	-0.5	45.1	44.3	43.2
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5	Length	Standard length of the conduit is 3 Meters.																																																						
6	Bending Test	After the test on samples at room temperature, the samples shall show no cracks visible to normal vision without magnification. Bending Test is applicable for 16mm, 20mm and 25 mm.																																																						
7	Compression Test	25% of compression allowed under load of 1250N for Heavy and Medium Conduits and 10% allowed after releasing the load.																																																						
8	Impact Test	After the test on Samples at specified temp, there shall be on sign of disintegration and crack visible to naked eye in at least nine out of twelve Samples.																																																						
9	Collapse Test	After the test on the conditioned samples, it shall be possible to pass gauge of specified diameter for conduits of 16 mm to 25 mm diameter in Light, Medium and Heavy Mechanical stresses.																																																						
10	Resistance to Heat	After the test, Ball diameter of impression on the sample shall not exceed 2mm.																																																						
11	Resistance to burning	Flame shall die out in less than 30 seconds after removal of burner.																																																						

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12	Electrical Characteristics	<p><b>(a) Di-electric strength</b>  No breakdown of conditioned sample shall occur at the voltage of 2000v &amp; 50Hz frequency for 15 minutes.</p> <p><b>(b) Insulation Resistance</b>  The insulation Resistance on conditioned Samples shall not be less than 100MΩ.</p>
13	Colours	<b>VIP ISI MARKED FRLS PVC CONDUITS</b> are available in Seven Colours. Namely, Black, White, Grey, Red, Blue, Green and Orange. Special colours against requirements can also be produced.
14	Packaging	<b>VIP ISI MARKED FRLS PVC CONDUITS</b> are packed in HDPE Woven Sacks.
<b>F R L S TESTS:</b>		
1	Oxygen Index Test (ASTM – D 2863 – 1987)	The minimum concentration of oxygen flowing upward in test column under equilibrium conditions should be minimum 21%, expressed as volume percent.
2	Temperature Index Test (ASTM – D 2863 – 1987)	The specific requirement under this test is minimum 250 °C.
3	Smoke Density Test Clear Beam Reading (ASTM – E – 662 – 1983)	Clear Beam Reading should range from a minimum of 0% to a maximum of 100%.
4	Flammability Test (ASTM – D – 635 – 1981)	<p><b>(i) Average Extent of Burning:</b>  The specific requirement on the average extent of Burning is &lt; 25 mm.</p> <p><b>(ii) Average Time of Burning:</b>  The specific requirement on the average time of Burning is &lt; 10 Sec.</p>
5	Halogen Acid Generation Test (mg/gm) (IEC – 754 – Part 1, 1994)	The maximum Halogen Acid Generation allowed under this test is 200 mg/gm.