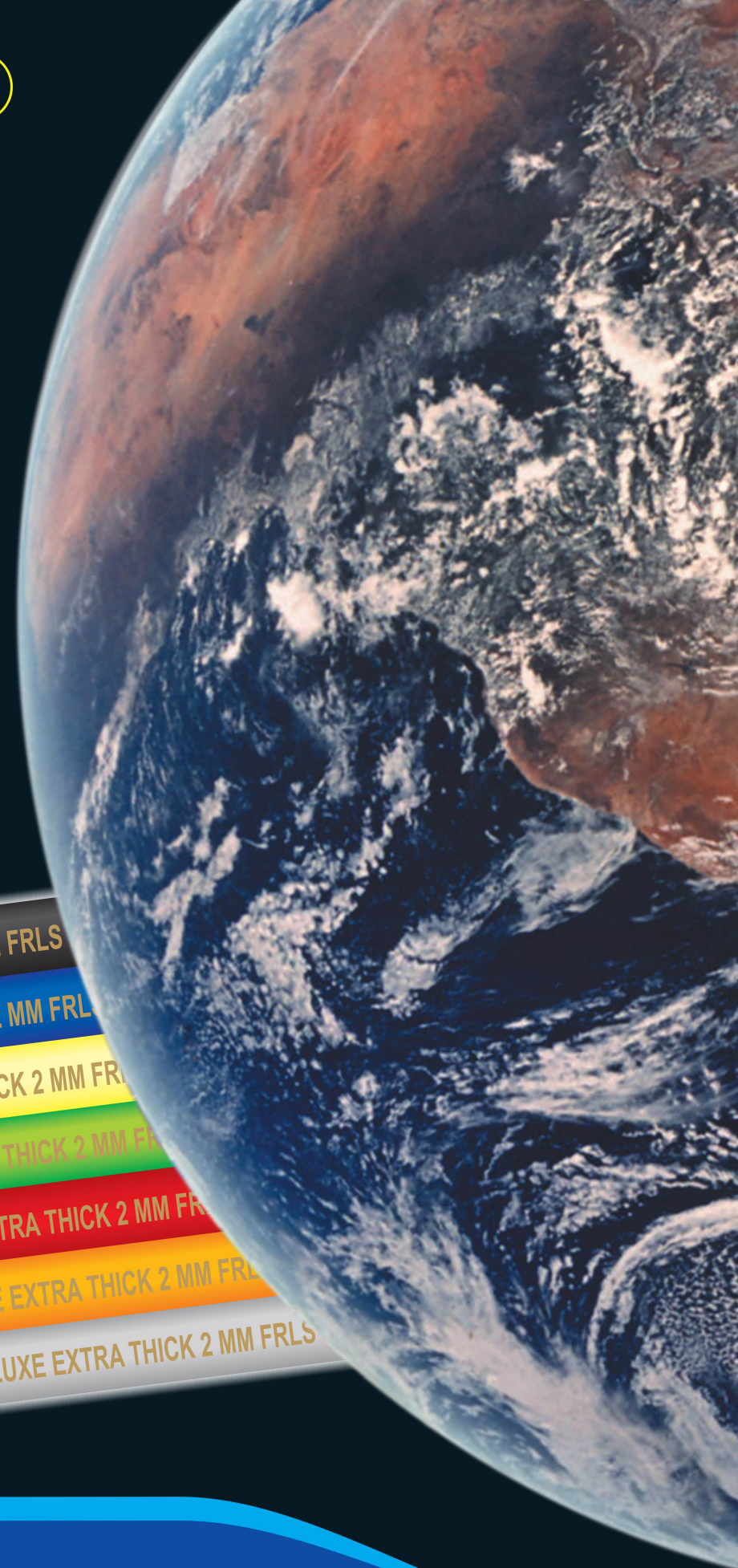




F.R.L.S

RIGID PVC CONDUITS

(Since 1982)



FOR ELECTRICAL INSTALLATIONS

NATIONAL PIPE PRODUCTS



COMPOUNDING MIXER - COOLER



TWIN SCREW



TWIN DIE HEAD

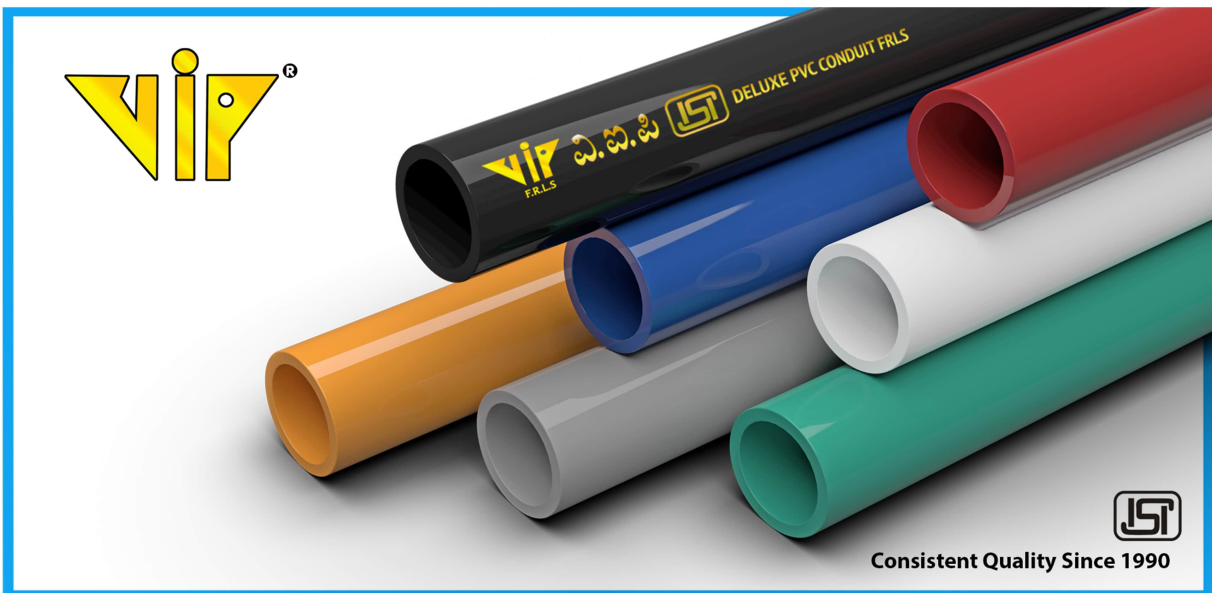


PVC CONDUIT PLANT

was set up in 1982 at Kamakshipalya, Magadi Road, Bangalore - 560079. for manufacturing of rigid P.V.C conduits and accessories under the brand name of **vip**®.

vip® rigid P.V.C conduits are manufactured conforming to I.S. 9537 (Part 1) 1980 and I.S. 9537 (Part 3) 1983 specifications except for dimensions.

vip® brand conduits are being used over the last three decades in prestigious projects by reputed Electrical Contractors, Information Technology Industry and Builders on recommendation by leading Electrical Consultants.



THE PRODUCT RANGE





Outside Diameter	WALL THICKNESS			Eccentricity**	Ovality**	Std. Packing Length x mtr
19	1.50	1.80	2.00	0.2	0.5	100 L x 3 mtr
20 (-0.3)	1.50	1.80	2.00	0.2	0.5	100 L x 3 mtr
25 (-0.4)	1.50	1.80	2.00	0.2	0.5	50 L x 3 mtr
32 (-0.4)	1.60	1.80	2.00	0.2	0.5	50 L x 3 mtr
40 (-0.4)	-	2.00	2.20	0.2	0.5	25 L x 3 mtr
50 (-0.5)	-	2.00	2.20	0.4	0.5	25 L x 3 mtr

* Tolerance on outer diameter is as per I.S Standard. All Dimensions in mm. ** Maximum permissible.

COLOURS :- BLACK ,GREY, ORANGE, RED , BLUE, GREEN and WHITE.

F.R.L.S :- All sizes of conduits and accessories are available in F.R.L.S. (Fire Retardant and Low Smoke) grade in colours

ADVANTAGES OF USING RIGID P.V.C CONDUITS: -

1. Are light in weight and can be installed easily in no time with less labour resulting in substantial cost saving.
2. Have excellent corrosion, chemical and scale forming resistance.
3. Are Fire Retardant, Low smoke, Rat & Termite Retardant. P.V.C is a self extinguishing polymer and does not promote fire.
4. Has required Mechanical, Electrical and Thermal Properties and can be used in open, concrete and underground applications.
5. Can be bent in any shape with help of Bending Spring,  conduits of 19/20 mm can be bent in 'O' shape, 25 mm in 'U' shape and 32 mm in 'L' shape without any aid.
6. Can be joined permanently by applying P.V.C solvent.
7.  P.V.C conduits have Specific Gravity of 1.35 - 1.45 g/ml
Tensile Strength of 492 / 562 kg/cm².
8.  P.V.C conduits are available in various colours for Colour Coding of wiring for Power , Fire Alarm, Telecom , Lighting , UPS , CCTV , Data Cabling and Sound System etc.
9. Use of non metallic conduits i.e. P.V.C conduits manufactured as per I.S. 9537 (Part I) 1980 and (Part 3) 1983 specification is approved by Tariff Advisory Committee for electrical installations and Fire alarm systems and there is no difference in rate of Insurance Premium. Insurance Premium is charged according to the usage of premises and not on the basis of material used for construction.
10.  PVC Conduits are screen printed at every meter & come with Hologram Stickers.

FACILITIES AT OUR LABORATORY FOR TESTING OF RIGID PVC CONDUITS AND TEST RESULTS

Each batch of **vip** rigid P.V.C conduits is tested as per scheme of testing and inspection as per I.S. 9537 (Part 1) 1980 and I.S. 9537 (Part 3) 1983 except for dimensions in our laboratory regularly and also tested by us at C.P.R.I Bangalore & CIPET Mysore.

1. Classification:-

Rigid Plain Conduit made of Insulating material i.e. P.V.C in different stresses.



2. Marking on each length:-

(Screen printing)

vip ವಿ.ಐ.ಪಿ (DELUXE) EXTRA THICK 2 MM
FRLS NATIONAL PIPE PRODUCTS TMR # 543440.

3. Dimensions :-

All dimensions are as per I.S. specification and are measured by various instruments.



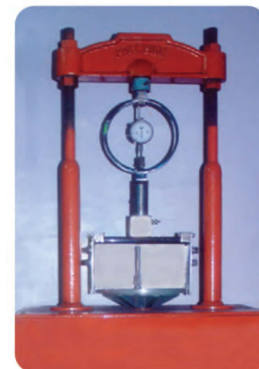
4. Construction :-

The inside and outside surface of the conduit is smooth, free from burs, flash and similar defects.

5. Compression Test:-

(a) The difference between the initial diameter and the diameter of the flattened conduit when a compression force of 750 N is applied does not exceed 25 % of initial diameter and

(b) it does not exceed 10 % after 1 minute of removal of compression force.



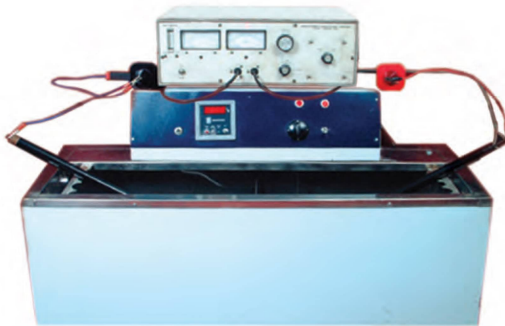
6. Impact Test :-

There is no sign of disintegration or crack on Impact testing after conditioning and fall of mass of hammer from a specified height.



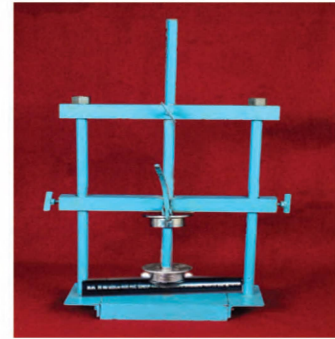
8. Resistance to Burning:-

The conduit does burn but the flame dies out within 1 second (specified 5 seconds) after removal of the burner.



10. Bending Test :-

Conduits of 16, 20 and 25 mm does not show any crack after testing the sample on bending up to 180° on a bending device at room temperature.



7. Resistance to Heat :-

On Ball pressure test the impression diameter does not exceed 2.0 mm.



9. Electrical Characteristics:-

No flashover or breakdown occurs and the measured insulation resistance is not less than 100 M .



11. Collapse Test :-

The specified gauges passes through the conduit to check the minimum I.D. in case of conduits of diameters 16, 20 and 25 mm.

FIRE RETARDANT AND LOW SMOKE

Following tests are conducted by us at the laboratory of C.P.R.I / C.I.P.E.T

TESTS	FUNCTION	SPECIFICATIONS	RESULT
Oxygen Index Test :- ASTM-D-2863-1987	To determine % of oxygen required for supporting combustion of insulating material at room temp.	Min. 21%	34.0%
Temp. Index Test :- ASTM-D-2863-1987	To determine at what temperature normal oxygen content of 21% in air will support combustion of insulating material.	Min. 250° C	> 250° C
Smoke Density Test :- ASTM-E-662-1983	To determine the visibility (light transmission) under fire of Insulating material.	-	> 92.5%
Flammability Test :- ASTM-D-635-1981	To determine the rate of burning and / or extent and time of burning.	Max. 25 mm	22.23 mm

ACCESSORIES : Conduit accessories i.e., P.V.C Bends, Couplers, Metal & P.V.C Junction boxes, PVC Solvent and Metal Fan boxes etc., are available.

NATIONAL PIPE PRODUCTS

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HOBLI, MAHADESHWARANAGAR,
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