

FRLS



Always ahead in  
Technology & Quality



IS : 9537



PART-3



AN IS / ISO-9001 COMPANY

**SUDHAKAR**

PVC ELECTRICAL CONDUITS & FITTINGS

# SUDHAKAR

PVC ELECTRICAL CONDUITS & FITTINGS

We are one of the leading and biggest PVC Electrical Conduits & accessories manufactures of South India belongs to renowned **SUDHAKAR** Group. Sudhakar is considered to be a synonym for PVC Pipes and fittings especially in Andhra Pradesh and Karnataka.



IS:9537  
  
 PART-3



- S** - Superior in Quality
- U** - Uniformity
- D** - Durability for a long life
- H** - Hygienic / High Corrosion Resistance
- A** - Absolute Items
- K** - Known - Well known brand in South India
- A** - Amenities - Pre & Post Sale Services
- R** - Reasonable Prices

## Rigid PVC Conduits confirming to Indian Standards :

**SUDHAKAR** Rigid PVC Conduits are manufactured in accordance with Bureau of Indian Standards specifications IS:9537 (Part-3) in the range of 16mm to 63mm with Light, Medium and Heavy ranges.

## Rigid PVC Conduits with FRLS (Fire Retardant Low Smoke)

**SUDHAKAR** Rigid PVC Conduits are available with FRLS (Fire Retardant Low Smoke) in the range of 16mm to 63mm with Light Medium and Heavy ranges.



## Dimensional Details of PVC Conduits as per IS : 9537 (Part-3)

| Out Side Diameter in mm | Tolerance on OD | Light  |                     |                     | Medium |                     |                     | Heavy  |                     |                     |
|-------------------------|-----------------|--------|---------------------|---------------------|--------|---------------------|---------------------|--------|---------------------|---------------------|
|                         |                 | Min ID | Min. Wall Thickness | Max. Wall Thickness | Min ID | Min. Wall Thickness | Max. Wall Thickness | Min ID | Min. Wall Thickness | Max. Wall Thickness |
| 16                      | -0.3            | 13.7   | 1.00                | 1.15                | 13.00  | 1.35                | 1.50                | 12.20  | 1.75                | 1.90                |
| 20                      | -0.3            | 17.4   | 1.15                | 1.30                | 16.90  | 1.40                | 1.55                | 15.80  | 1.95                | 2.10                |
| 25                      | -0.4            | 22.1   | 1.25                | 1.45                | 21.40  | 1.60                | 1.80                | 20.60  | 2.00                | 2.20                |
| 32                      | -0.4            | 28.6   | 1.50                | 1.70                | 27.80  | 1.90                | 2.10                | 26.60  | 2.50                | 2.70                |
| 40                      | -0.4            | 35.8   | 1.90                | 2.10                | 35.40  | 2.10                | 2.30                | 34.40  | 2.60                | 2.80                |
| 50                      | -0.5            | 45.1   | 2.20                | 2.45                | 44.30  | 2.60                | 2.85                | 43.20  | 3.15                | 3.40                |
| 63                      | -0.6            | 57.0   | 2.70                | 3.00                | -      | -                   | -                   | -      | -                   | -                   |

## Colour Codes for Thickness :

- Green** : Lies with in the requirement of Bureau of Indian standards but of Light Gauge. (LMS)
- Red** : Lies with in the requirement of Bureau of Indian standards but of Medium Gauge. (MMS)
- Brown** : Lies with in the requirement of Bureau of Indian Standards but of Heavy Gauge. (HMS)

**Rigid PVC Conduits suitable to Market requirements :**

SUDHAKAR Rigid PVC Conduits are manufactured as per Market requirements in the range of 12.5mm, 16mm, 19mm, 25mm, 32mm, 40mm and 50mm with 0.8mm to 2mm Wall thicknesses.

**Colour Codes for Thickness :**

- Yellow with Red background** : For 0.8mm ( Janatha ) Wall Thickness.
- Black** : For 1.0mm Wall Thickness.
- Yellow with Black background** : For 1.2mm Wall Thickness.
- Green** : For 1.5mm Wall Thickness.
- Blue** : For 1.8mm Wall Thickness.
- Red** : For 2.0mm Wall Thickness.



**Colour Options**

SUDHAKAR Electrical Conduits are available in specific colours like black, off - white & grey.

**Dimensional Details of Rigid PVC Conduits.**

| Size   | Wall Thickness | Wall Thickness | Wall Thickness | Wall Thickness | Wall Thickness | Wall Thickness |
|--------|----------------|----------------|----------------|----------------|----------------|----------------|
| 12.5mm | 0.8mm          | 1.0mm          | -              | -              | -              | -              |
| 19mm   | 0.8mm          | 1.0mm          | 1.2mm          | 1.5mm          | 1.8mm          | 2.0mm          |
| 25mm   | 0.8mm          | 1.0mm          | 1.2mm          | 1.5mm          | 1.8mm          | 2.0mm          |
| 32mm   | -              | -              | -              | -              | -              | 2.0mm          |
| 40mm   | -              | -              | -              | -              | -              | 2.0mm          |
| 50mm   | -              | -              | -              | -              | -              | 2.0mm          |

All the above Pipes are available in the standard length of 3 meters only.



**Rigid PVC Conduits & Accessories :**

We manufacture Rigid PVC Conduits & Accessories from 20mm to 63mm.

- 1) **Junction Boxes**  
From 20mm to 40mm
  - a) 1 Way Terminal
  - 2 Way Through
  - 3 Way Tee
  - 4 Way Intersection
- 2) **Deep Junction Boxes**  
From 20mm to 40mm
  - a) 1 Way Terminal
  - 2 Way Through
  - 3 Way Tee
  - 4 Way Intersection
- 3) **Couplers**  
From 20mm to 63mm
- 4) **Tee**  
From 20mm to 63mm
- 5) **Slip Type Coupling Bends**  
From 20mm to 63mm
- 6) **Closer (End Cap)**  
From 20mm to 63mm
- 7) **Elbow**  
From 20mm to 63mm

**Junction Boxes & Deep Junction Boxes Contains 60 No's in Each Box**



## Applications :

- **Domestic** - Open / Surface and concealed wiring in houses, residential and commercial Buildings
- **Industrial** - Open / Surface and concealed wiring in plants, Tele communications & Telephone Cables
- **Other** - Traffic signal connections, street light & wiring at public places.

## Advantages :

**High Corrosion Resistance** : SUDHAKAR Rigid P.V.C. Conduits are non-corrosive by nature and are not attacked by corrosive, salty atmosphere & excessive humidity. They are immune to chemical and galvanic corrosion. Hence they are ideal Electrical Conduits.

**Fire Resistance** : SUDHAKAR Rigid P.V.C. Conduits do not support combustion and when the source of Ignition is removed they are self extinguishing. Hence they are safer than other Pipes.

**Conductivity** : SUDHAKAR Rigid P.V.C. Conduits is a non-conductor of electricity and as such Sudhakar prevents electrical shocks and shorts. Hence they are most suitable for electrical conduits.

**Lightweight** : SUDHAKAR Rigid P.V.C. Conduits have low specific gravity, which implies that it is much lighter than the pipes made from more traditional materials. SUDHAKAR Pipes are therefore easier to handle and longer or larger sections can be installed easily. This results in reduced Transportation & Installation costs.

**Easy Wiring** : SUDHAKAR Conduits have smooth interior walls which helps in reduced friction thus helping in easy wiring.

**Easy Installation** : SUDHAKAR Rigid P.V.C. Conduits can be shaped & joined with out difficulty. SUDHAKAR Pipes are joined by Solvent cement, which is simpler, Cheaper & easier.

**Strength** : SUDHAKAR Rigid P.V.C. Electrical conduits have high mechanical strength that is attested by tests conducted as specified in IS : 9537 (Part-3) of 1983. Hence they can be used both in open / Surface and concealed installation.

**No Maintenance** : SUDHAKAR Conduits need no maintenance due to their excellent weathering properties.

**Durability** : SUDHAKAR Rigid Electrical Conduits last for a lifetime.

## Properties :

SUDHAKAR Rigid P.V.C. Conduits have the following physical & Electrical Properties.

|  |   |             |
|--|---|-------------|
| Specific Gravity                       | : | 1.4 to 1.46 |
| Tensile strength Kgf / cm <sup>2</sup> | : | over 500    |
| Breakdown voltage KV / mm              | : | 18          |
| Insulation Resistance                  | : | ≥100Ω       |

Each batch of SUDHAKAR Electrical Conduits & Fittings are tested as per Bureau of Indian Standards relevant scheme of testing and inspection. We under take the following acceptance and type tests in our laboratory before dispatch the material.



1. Checking of dimensions
2. Bending Test
3. Compression Test
4. Impact Test
5. Collapse Test
6. Resistance to heat
7. Resistance to burning
8. Electrical characteristics

### Quality Control :

**SUDHAKAR** Group of Companies. is having well equipped quality testing equipments in their labs as per the ISI standards for testing of all PVC Electrical Conduits & Accessories . The high quality performance is attained with experienced and qualified staff and skilled workers. **For quality systems company is having a prestigious ISO-9001 / 2000 Certification**

### Installation Jointing Procedures :

- Open : Use clamps to hold.
- Concealed : Make a slot of appropriate width in wall, fix pipe in slot and Cover with Mortar.

### Conduit Installation Instructions :

- Cut Size 1/2" to 1 1/2" Size Square using a fine tooth Handsaw and dedurr each end of conduit.
- After cutting and deburring, wipe pipe ends clean of dust, dirt and shavings.
- Make sure both the conduit and coupling are clean and dry before any solvent cement applied.
- Apply coat of solvent cement to end of conduit to the length of socket to be attached.
- Wipe the excess cement left in bush to the inside the coupling.
- Push conduit firmly in to fittings while rotating about one quarter run turn to spread cement evenly. push and rotate the conduit until the ends meet.
- Allow cement to set until dry.

### Packing in each bundle in meters

| Wall thickness in mm | NOMINAL SIZE (OUTSIDE DIAMETER) |     |     |    |    |    |
|----------------------|---------------------------------|-----|-----|----|----|----|
|                      | 12.5                            | 19  | 25  | 32 | 40 | 50 |
| Janatha              | 600                             | 300 | 150 | -  | -  | -  |
| 1.0                  | 600                             | 300 | 150 | -  | -  | -  |
| 1.2                  | -                               | 300 | 150 | -  | -  | -  |
| 1.5                  | -                               | 300 | 150 | -  | -  | -  |
| 1.8                  | -                               | 300 | 150 | -  | -  | -  |
| 2.0                  | -                               | 300 | 150 | 75 | 75 | 45 |