

IS 9537



Part-3

konseal[®]

From an ISO Certified
manufacturing
Company



**Tough.
Resilient.**

- PVC Trunking
- PVC Wiring Pipes
- PVC Channels
- PVC Fittings



Only virgin PVC goes into the making of **konseal**[®] - offering better quality, better fire resistance, better shock resistance and 100% recyclable, thus making it environment friendly.

Tough. Resilient.

The **konseal**[®] range of high quality PVC products are brought to you by one of South India's top manufacturing houses. **konseal**[®] specializes in PVC Wiring Pipes, Fittings, PVC Channels and PVC Trunking.

konseal[®] has become the product of choice for responsible engineers and quality conscious end-users alike. With its highly organised network of dealers, it is not surprising that **konseal**[®] rules for wide spread availability, reliability and affordability. Like the material that **konseal**[®] dedicates itself to PVC, the company has proven itself to be tough enough to withstand market pressures - and resilient enough to adapt to all kinds of market conditions.




konseal[®] PVC Conduits. Shock-proof your life.



konseal[®] PVC Conduits conforming to IS:9537 are perfect for electrical applications, because of PVC's resistance to breakdown under high electrical voltage.

It is also a poor conductor of electricity. **konseal**[®] range of conduits are resistant to weathering, chemical rotting, corrosion, shock and abrasion.

Manufactured on fully automated machines, **konseal**[®] PVC Conduits are made of impact modifying, insulating compounds, mixed at 140° C in high speed mixers. With stringent quality control measures in place, it is no wonder that the product meets BIS Standards and is  certified.











konseal[®] PVC Conduit Specifications:

| Size | Outside Diameter | Tolerance on outer Diameter | Inside Diameter | | | Wall Thickness | | | Standard Length (Meters) |
|------|------------------|-----------------------------|-----------------|--------|--------|----------------|--------|--------|--------------------------|
| | | | Light | Medium | Heavy | Light | Medium | Heavy | |
| 16 | 16mm | -0.3mm | 13.7 mm | 13mm | 122mm | 1.0mm | 1.35mm | 1.75mm | 3 |
| 20 | 20mm | -0.3mm | 17.4mm | 16.9mm | 15.8mm | 1.15mm | 1.4mm | 1.95mm | 3 |
| 25 | 25mm | -0.4mm | 22.1mm | 21.4mm | 20.6mm | 1.25mm | 1.6mm | 2.0mm | 3 |
| 32 | 32mm | -0.4mm | 28.6mm | 27.8mm | 26.6mm | 1.5mm | 1.9mm | 2.5mm | 3 |
| 40 | 40mm | -0.4mm | 35.8mm | 35.4mm | 344mm | 1.9mm | 2.1mm | 2.6mm | 3 |
| 50 | 50mm | -0.5mm | 45.1mm | 44.3mm | 43.2mm | 2.2mm | 2.6mm | 3.15mm | 3 |
| 63 | 63mm | -0.6mm | 57.0mm | - | - | 2.7mm | - | - | 3 |

konseal[®] PVC Conduits - Packing quantity per bundle

| Item | Meters | Lengths |
|-------|--------|---------|
| 16 mm | 450 | 150 |
| 20mm | 300 | 100 |
| 25mm | 150 | 50 |
| 32mm | 75 | 25 |
| 40mm | 75 | 25 |

Periodical Quality Tests

| | Name of test | Nature of test |
|---|--------------------------------|---|
|  | Test of marking | The marking shall be indelible by petroleum sprit. |
|  | Test of inner diameter | The inner diametre shall be verified by means of a GO gauge |
|  | Test of minimum outer diameter | The minimum outer diameter shall be measured by means of a NO GO gauge. |
|  | Test of maximum outer diameter | The maximum OD shall be measured by means of a GO gauge. |
|  | Resistance to burning | When subject to a high intensity flame for 30 seconds, the conduit shall not burn by itself, after removing the flame. |
|  | Resistance to heat | The Conduit is subjected to 60°C in a hot air oven and the resistance to heat is measured by means of the testing apparatus. |
|  | Compression test | Force in the range of 125 N to 1250 N is applied depending on the class of conduit by means of the compression test apparatus. The dimensions should comply with the standards after release of compression pressure. |
|  | Bending test | Bending test is conducted, by bending with the aid of spring and test apparatus, to 180 degrees. No cracks should appear after the test. Samples, which are cooled up to -5°C are also subject to the same test |
|  | Insulation test | The conduits are tested for insulation at minimum 500 mega ohms. |
|  | High voltage test | The conduits are subject to 2000 V AC by means of the test apparatus. No break down shall occur during the test. |

Recognition for Quality



BUREAU OF INDIAN STANDARDS

(Ministry of Consumer Affairs, Food & Public Distribution, Government of India)

Kerala Branch Office



Approvals

konseal[®] has won approvals from Government departments like | PWD (Govt. of Kerala) | CPWD (Govt. of India) | Directorate General of Supplies & Disposal (Govt of India) | Indian Railways | BSNL | Military Engineering Service | Cochin Port Trust | Cochin International Airport Ltd. (CIAL) | Cochin Shipyard

Various associations like | Kerala Electric Traders Association (KETA) | Kerala Electric Wiremen and Supervisors Association (KEWSA) | AKLSWA and ESLWA too have recommended **konseal**[®]

ISO Certification

Tubes & Tubings has become an ISO Certified unit in October 2004. Certification was done by Intertek Certifications Limited, UK under UKAS accreditation, which is one of the prestigious accreditation boards worldwide.

Conduit Installation - Methods Surface Installation

In surface installation, the conduit is fixed using saddles or spacer bar saddles. The maximum recommended spacing between the saddles is 1.0 m for the horizontal conduit runs and 1.25 m for vertical conduit runs. Saddles should be fixed 20 cm on either side of bends or boxes. As PVC conduit expands, with increasing temperatures, for expansion/contraction movements in long straight runs, the use of an expansion coupling is recommended every 6 m to absorb expansion and avoid conduit buckling.



Bending

Bending of conduit up to 25 mm diameter can be carried out cold, using the correct bending spring size, according to the diameter and the gauge of the conduit. After inserting, the bend can be made by hand or across the knee, by bending slightly beyond the required angle, and allow the conduit to recover back to the required position. The bending should not be done too fast and once made a bend should not be forced backwards, as this action can lead to conduit or spring damage. According to IEE regulations, the bend inner radius should not be less than 2.5 times the conduit's outside diameter.

For conduit sizes over 25 mm diameter, hot bending is required with the same procedure as cold bending, but with the application of gentle heat just before bending. No open flame should be used for heating, rather a hot air torch or hot water. Once the conduit is warm, it can be bent around a suitable former and held there until it cools down and sets in position.



Conduit bending with the aid of spring and test apparatus.



Bending Spring

Our client list:

- Asset Homes
- Cochin International Airport Ltd.
- Cochin Port Trust
- Cochin Shipyard
- Crescent Builders, Calicut
- CPWD. Govt. of India
- Godrej and Boyce
- Kannur International Airport Ltd.
- KITCO
- Landmark Builders, Calicut
- Malabar Cancer Centre, Thalassery
- Matha Amrithanandamayi Math
- Naval Base, Cochin
- PWD. Govt. of Kerala
- Ramada Hotel, Trivandrum
- RDS Projects Ltd.
- Skyline Builders
- Southern Railway

This list is not comprehensive

Excelling in all arenas - Our sister concerns include:

Lakshmi Polymers

Manufacturers of PVC Garden Hoses.

Chloroplast

Manufacturers of Shakthiman Super PVC Pipe Fitting.
www.shakthimansuper.com

Millennium Rubber Technologies (P) Ltd.

Manufacturers of Rubber Rice Rollers &
Moulded Automobile Components.
www.mrtpl.in

Centre for Research and Consultancy

Management consultancy and Marketing Research
www.crckochi.com

Shakthiman Extrusions Pvt. Ltd.

Manufacturers of Shakthiman Super PVC Pipes
www.shakthimansuper.com



konseal[®]

**PVC Trunking | PVC Wiring Pipes
PVC Channels | PVC Fittings**



Marketing Office: 3rd Floor, Khadi & Village Ind. Federation Building, Padivattom,
Edappally PO., Cochin - 682 024, Kerala. Tel: 0484-2808308 / 2808708 / 2808908

Factory: Akanad, Mudakuzha PO., Ernakulam - 683 546, Kerala. Tel: 0484-2649708 / 2649808 / 2641608

konseal PVC Profiles Pvt. Ltd.

Factory: Plot No 10, INKEL Business Park, Angamaly, Ernakulam - 683 573, Kerala.

marketing@konseal.com | www.konseal.com

Customer care: 93886 19940

follow us on:  konseal  mykonseal  konseal