VARUN SAMIT

PE PIPES FOR GAS

- High Impact Strength
- Damage Resistant
- Flexibility
- Ease of Installation
- High Flow
- Low Resistance
- Chemical Resistance
- Corrosion Resistance

FOR GAS DISTRIBUTION NETWORKS

VARUN™

- The name is the guarantee

An ISO 9001:2015 Certified Company

IS 14885:2001

VARUN SAMIT

PE PIPES FOR GAS

Polyethylene have been used to produce pipes for carrying natural gas for a number of years now. Due to extensive research in developed countries in gas distribution technology and introduction of new generation polyethylene compounds presenting very high performance, the confidence in the use of PE pipes for gas distribution is also very high and has achieved commendable results over the years.

The usage of polyethylene as piping material has gained favor in recent years since it offer advantages in costs as well as in technical requirements such as lower permeation of gas constituents compared to convention piping, lack of corrosion effects, flexibility of the material, allowing supply of gas in long tube lengths, relining operation of old gas networks and the possibility of use with directional drilling methods. These methods reduce the interruption in traffic flow, excavation and annoyance to general public. The use of Butt fusion and electro fusion techniques enables the repair easier and more economical than steel piping systems.

Unique Properties - Polyethylene Pipes

- **High Impact Strength:** The high impact strength of PE pipes ensures resistance to the rigors of pipe laying conditions.
- **Damage Resistant:** PE has low notch sensitivity, providing a high level of resistance to the effects of external damage, especially important for pipe bursting operations and where there is a likelihood of such damage.
- **Flexibility:** PE pipes are flexible and can be curved during installation. This inherent resiliency and flexibility allows the pipe to handle stresses caused by soil movement. This makes the pipes particularly useful in earthquake prone areas too.

- **Ease of Installation:** PE pipes are easy to install with their light weight and long lengths. Smaller diameter pipes offer in greater length per coil, varying from 100 m - 1000 m coils, therefore reducing the number of joints resulting in faster and easier installation.
- **High Flow- Low Resistance:** PE pipes have lower friction factors compared to non-plastic materials
- **Chemical Resistance:** Pipe has good resistance to most solvents and chemicals which it is likely to encounter in natural and manufactured gas distribution services
- **Corrosion Resistance:** Since polyethylene does not corrode and is resistant to most chemicals, this pipe does not lose strength due to either gas corrosion or external galvanic soil conditions. The design characteristics of flexible polyethylene pipe allows for long-term resistance to earth loading and soil movement.

VARUNFLO - PE
IS 14885:2001

IS 14885:2001

VARUN QUALITY POLICY

Varun Piping Systems takes great pride in the quality and workman-ship of all of our products.

Our quality control System encompass three critical aspects of the manufacturing process:

- The Incoming raw material, Pipe production, and the Finished goods.
- Incoming material is visually inspected and tested to ensure the material meets all applicable requirements before its release for production.
- During production, the pipe will be visually examined for any dimensional defect and pipe samples will be collected for physical verification and testing for compliance.
- Each Lot of pipes are tested in our In-House Quality Control Lab as per applicable standards.
- **The following tests are carried out** • Hydro Static Pressure Test for plain as well as Notched pipes Density Test • Melt Flow Index (MFI) Test • Reversion Test • Oxidation Induction Time Test • Tensile Test
- Without exception, Varun pipes are constantly monitored throughout the entire manufacturing process to validate that they are in accordance with all applicable specifications.

Features of VARUN - SAMIT PE Pipes

- Manufactured with virgin, one of the world best Pre-compounded Raw material as per international Standards having excellent long term hydraulic strength
- Smooth inner and outer surface giving low frictional resistance
- Dimensions of the pipe under strict tolerances as per BIS Standards
- Ease in jointing by any jointing techniques – Butt Fusion, Electro fusion
- Ideal choice for open trench laying, Trench less HDD applications
- Consistent in Quality and Value for money.

PRODUCT SPECIFICATIONS

VARUN-SAMIT PE PIPES FOR GAS DISTRIBUTION NETWORKS

Size Range: 20mm – 180mm
Standard Dimension Ratio: SDR 11, SDR 17.6
Grade: PE100 & PE80
Color: Orange for PE100, Yellow for PE80
All dimensions as per IS 14885:2001

IS CERTIFICATION

- BIS License CML 6800116010 as per IS 14885:2001.

IS 14885:2001

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IS 14885:2001

VARUN **SAMIT**

PE PIPES FOR GAS

PHYSICAL PROPERTIES

Properties	PE100 (Orange) Typical Values	PE80 (Yellow) Typical Values
Density (Compound)	951 kg/m3	944 kg/m3
Melt Flow Rate (190'C/5.0kg)	0.25 g/10min	0.80 g/10min
Tensile Modulus (1mm/min)	1000 Mpa	800 Mpa
Tensile Strength at Break (50mm/min)	>600%	>600%
Tensile Strength at Yield (50mm/min)	25 MPa	19 Mpa
Pigment Dispersion	<= 3	<=3
Oxidation Induction Time (210'C)	>20 mins	>20 mins
Resistance to Rapid Crack Propagation, S4 Test	10Bar	>3 Bar
Resistance to Slow Crack Growth (9.2 Bar, 80'C)	>1000 Hours	>2000 Hours
Long Term Hydraulic Strength	10 Mpa@20'C for 10,000 Hours	8 Mpa@20'C for 10,000 Hours
Resistance to Gas Constituents (@80'C, stress 2 Mpa)	>20 Hours	>20 Hours

*Above referred data are indicative values and should not be used for specification work

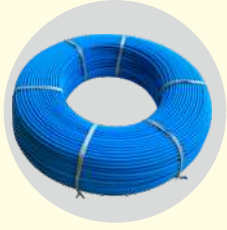
Products of Varun

"Varunflo™" HDPE Pipes

IS 4984:2016

Size Range:
20mm - 450mm OD
PN2.5-PN16
PE100 & PE80 Grade

"Varunflo™" MDPE Pipes



Blue MDPE Pipes
as per ISO: 4427

"VARUN™" Rigid PVC Pipes

IS 4985:2000

Size Range:
20mm - 200mm OD
4kgf/cm2, 6kgf/cm2 &
10kgf/cm2

VARUN™

VARUN PIPING SYSTEMS

Regd. Office:: Plot # 35P, Shivalli Industrial Area, Manipal - 576 104, INDIA
Tele: +91 820 2570892, +91 820 2570893 | E-mail: mail@varunpiping.com

www.varunpiping.com

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