

# **Total Piping Solution**

# Ultra PLU5®

## **Double Wall Corrugated Pipes**

...an Ideal pipes for drainage and sewerage application



The Supreme Industries Itd., is an acknowledged leader of India's plastic industry. It is credited with pioneering several path breaking products and has been a torch bearer in the transition from conventional to advanced plastic piping products in the country. Its customer centric approach fuels its research for designing unmatched quality products to meet the aspirations of its quality conscious customers. The innovative product portfolio offered by Supreme is extensive in range and application and comprises variety of pipes and vast spectrum of fittings totaling over 8500 diverse products.

After successfully introducing 'Nu-Drain' underground drainage and sewer system, 'Eco-drain' and 'Foam Core' structured wall pipes we are proud to offer 'Double Wall Corrugated' (DWC) pipes; one more variety of structured wall pipes under the brand name of 'Ultra Plus'. Manufactured using the state of the art technology, Supreme ultra plus DWC pipes are much stronger than the solid wall pipes of the same wall thickness. A unique corrugated external wall structure and glass smooth internal surface allows uninterrupted flow without any blockages and also provides required stiffness and flexibility to sustain soil and traffic loads. It offers a wonderful combination of lowest inner friction, smooth flow characteristics, high flexibility, superior strength to weight ratio and ability to support and distribute live and dead loads. These pipes are much lighter than any conventional or solid wall plastic (PVC, HDPE or PP) pipes. This remarkable material property gives these pipes an edge over many other conventional pipes in terms of handling and installation.

#### **Unique Features**

- Great flexibility Excellent Stiffness
  - Perfect hydraulic properties
  - Easy and quick installation
- Watertight joints Maintenance Free
- Long Life Cost effective Eco-friendly



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#### **Unique Features**

**Great flexibility** - Being light in weight and elastic in nature, these pipes offer lot of flexibility while installation as they are adaptable to any type of contour patterns.

**Excellent stiffness** - Suitable to withstand heavy overload pressure (soil and traffic loads) and sustain various loads that will encounter during installation and in use.

**Perfect hydraulic properties** - Glass smooth inner surface having manning's coefficient 0.009 - 0.010 (which remain constant without any deterioration during life expectancy) helps in rapid disposal of flowing waste. Such a smooth surface greatly reduces the possibility of blockages and maximizes the flow characteristics and therefore carrying capacity increases by 40% over concrete pipes.

**Excellent chemical, corrosion and abrasion resistance properties** - Being in plastics, these pipes are free from corrosion and offer excellent resistance to wide range of chemicals. These pipes have excellent abrasion resistance which gives an edge over metal and concrete pipes.

**Watertight joints** - Joints are 100% watertight and hence free from any infiltration, ex-filtration and root penetration. Due to this feature, surroundings remain unaffected and possibility of soil or underground water pollution is eliminated.

## **Applications**

Supreme Ultra plus DWC pipes can be used for varied applications as mentioned below:-

- · Underground drainage and sewer application
- · Disposal of industrial effluents
- · Storm water drainage
- · Rainwater harvesting and ground water recharge
- · Road/highway cross drainage

These applications are very few and the PE DWC pipes are finding new usages almost regularly and adding further benefits to this superior technological marvel at a very fast pace.



**Easy and quick installation**- Due to longer lengths and lighter weight pipes, installation becomes very convenient and fast. These pipes are very easy to joint using slip-on techniques (Pipes are supplied either with integrally welded couplers or separate couplers). Unlike conventional concrete or metallic pipes, these pipes do not require any heavy handling equipment for installation due to their light weight property. These pipes can be easily laid in constrained areas thereby saving additional extraneous costs.

**Maintenance free** – Being free from scaling, encrustation and chemical re-activeness there is no need of any regular maintenance. Occasional flushing with water keeps the surface smooth and helps in enhancing the functionality.

**Long life** - Being free from corrosion, chemical reactiveness and excellent abrasion resistance these pipes can last over a century.

**Cost effective** - 60 to 70% weight saving in comparison to solid wall plastic pipes and 95% lighter than concrete pipes makes these pipes much cost effective.

**Eco-friendly-** Processing and reprocessing of these pipes does not have any adverse impact on the environment, watertight joints eliminates the possibility of soil and underground water pollution.

#### **Product Range**

Supreme DWC pipes manufactured according to IS:16098 standards are offered from 75 to 800mm sizes in SN 4 and SN 8 stiffness class. These pipes are made available in plain end form as well as with integral sockets along with necessary fittings. Assembly jig required for the installation is also made available.

Dimension of DWC Pipes		
Nominal size DN/ID series (mm)	Approx ID (mm)	Approx OD (mm)
75	75.0	90.0
100	98.0	116.0
135	131.0	156.0
150	148.5	172.5
170	166.0	198.0
200	197.4	230.5
250	248.5	289.0
300	300.0	350.0
400	395.2	465.0
500	496.7	577.0
600	594.6	685.0
800	787.0	925.0



## **Double Wall Corrugated Pipes**

## **Fittings**



**Coupler** 75 to 800 mm



**Bend 90°** 100 to 300 mm



**Bend 60°** 150 to 250 mm



**Bend 30°** 150 to 250 mm



**Bend 22.5°** 150 to 250 mm



Bend 45°

100 to 300 mm

**Bend11.25°** 150 to 250 mm



**Equal Tee** 100 to 300 mm



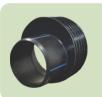
Cross Tee 150 mm



**Single Y** 100 & 150 mm



**Adapter** 160 x 150 to 315 x 300 mm



Adapter (PE) Adapter (PVC) 110 x 100 to 315 x 300 mm



**Rubber Seal** 75 to 800 mm



## **Quality, Testings and Certifications**

We are equipped to carry out all stringent tests required as per IS:16098 and also ISO:21138 and EN 13476. This helps us to maintain superior quality and to ensure trouble free performance of our products. Some of the important tests for double wall corrugated polyethylene pipes are as given below:-

- Ring Stiffness
- ....9 ........
- Creep Ratio
- Physical Properties
- Water Tightness Test
- Effect on Heating
- Ring Flexibility
- Oxidation Induction Time Test
- Impact Test
- Melt Flow Index Test









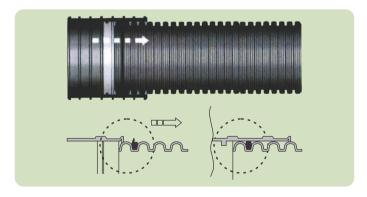
## **Double Wall Corrugated Pipes**

#### **Jointing Procedure**

Pipes up to 250mm as well as 500 and 800mm sizes are supplied plain ended with separate couplers whereas 300mm and 400mm sizes are supplied in both varieties i.e. with integral sockets as well as with separate couplers. Procedure for jointing these two types of pipes is given below: -

## **Pipes with Integral Socket**

- Ensure that the pipe socket is free from damages.
- Fit EPDM rubber seal into the first corrugation of the plain ended pipe. Make sure that the seal is correctly placed and see that it is not twisted.
- Align the socket end of pipe with non-socket end of the other
- Clean and remove dirt, dust, water etc. from the pipe ends and sockets.
- Mount the fixture on plain end of pipe and on socketed end of other pipe for Joining. Fixture should be duly placed in the grooves for better holding.
- Apply SILAID rubber lubricant on the EPDM rubber ring and inside the socket.
- Place the pulling arms of the fixture on either side of the appropriate pin
- Pull the pipes in to the socket till it reaches up to the stopper
- Remove the fixture and clean extra lubricant from the pipe
- Ensure that the fitment is secure and the socket is not damaged or open anywhere.
- Continue the same process for all socketed pipe joints.



#### **Plain Ended Pipes**

- Fit EPDM rubber rings into the first corrugation of each pipe. Make sure that the seal is correctly placed and see that it is not twisted.
- Clean the pipe ends, socket of the coupler and rubber sealing rings and apply lubricant on the sealing ring placed on the pipe ends and inside of the coupler socket up to the pipe stopper.
- Align the pipe ends and coupler socket, face to face and put the jointing fixture over the pipe end and coupler. With the help of fixture, pull the coupler in to the pipe till the pipe reaches to the stopper end.
- Follow the same procedure for joining of coupler socket to another plain end pipe.



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