

SUDHAKAR HDPE PIPES

# AHEAD OF OTHERS

# Sudhakar

IS:4984



## **SUDHAKAR** **HDPE PIPES**

20mm to 250mm

### The Company :

**Sudhakar Plastic Limited** set up in the year 1994. The Company pioneers the production of HDPE Pipes, uPVC Pipes & Fittings and LLDPE Pipes in South India equipped with the most modern machinery and constantly striving towards satisfying customer demands.

### Profiles :

Product	: HDPE Pipes
Capacity	: 3500 Metric Tonnes per Annum
Location	: Suryapet, Nalgonda (Dist) Andhra Pradesh
Quality Control & Quality Assurance	: High Profile Laboratory & Machinery
Plant & Machinery	: World renowned Manufacturing & Testing Facilities.

#### High Density Polyethylene Pipes for Water supply as per IS:4984 / 95

**SUDHAKAR HDPE Pipes** are manufactured in accordance with Bureau of Indian Standards specifications IS : 4984/95 and other International Standards. We manufacture in the range of

Material Grade	Size	Pressure Rating Of Pipe	Maximum Permissible Working Pressure
PE-63 & PE-80	20mm to	PN 2.5	0.25 Mpa
	250	PN 4	0.40 Mpa
		PN 6	0.60 Mpa
		PN 8	0.80 Mpa
		PN 10	1.00 Mpa
		PN 12.5	1.25 Mpa

**Applications** : Water supply in rural and urban areas for Irrigation & Drinking

- ❖ pipes of small diameter are supplied in coils range from 25-500 Meters depending on the Pipes Dimensions.
- ❖ Large Diameters in fixed length of 3-12Mtrs. as per customer requirements.

#### Polyethylene Pipes for Sprinkler Irrigation

**SUDHAKAR** Polyethylene Pipes for Sprinkler Irrigation are manufacture in the range of 40mm to 200mm of different working pressures 0.25 Mpa, 0.32 Mpa, 0.4 Mpa and 0.6 Mpa.

**Applications** : Sprinkler Irrigation

#### Permanently Lubricated HDPE Telecom Ducts

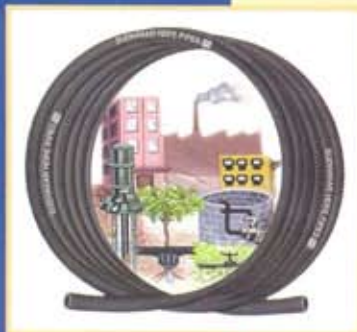
**SUDHAKAR** Permanently Lubricated HDPE Pipes are manufactured as per Department of Telecommunications specifications. We manufacture in the range of 32mm OD and 3mm Wall thickness, 40mm OD and 3.5mm Wall thickness.

**Application** : Under ground optical Fiber Cable Conduits

S/N	Size of duct (mm)	Outside Dia. of (mm)	Tolerance on Outside Dia (mm)	Wall Thickness (mm)	Tolerance on Wall Thickness (mm)
1.	40/33	40	+0.4	3.5	+/-0.2
2.	32/26	32	+0.3	3.0	+/-0.2

Variety  
uses of  
**SUDHAKAR**  
HDPE Pipes

IS:4984



### Features & Advantages :

- \* Light Weight
- \* Toughness
- \* Chemical Resistance
- \* Low Electrical and Heat Conductivity
- \* Easy Jointing and Installation
- \* Durability
- \* Smooth Finish
- \* Flexibility



### Jointing Methods Permanent Joints



#### a) Heated Tool Welding (Butt Fusion)

Butt-Fusion Jointing normally used for HDPE pipes. This jointing method combines the advantages of Cheapness & simplicity with joints of strength equalling that the pipes it self.

#### The Butt Fusion - Procedure

- Clean the Pipe ends
- Clamp pipe ends tightly in to the fusion machine and trim both surfaces squarely by rotating the double edged trimmer.
- Remove trimmer and check for square uniform alignment by pressing the pipe ends together.
- With pipe ends properly faced, insert the heater plate at 205<sup>o</sup>C Watch for a proper melt bead formation uniformly around the circumference of both pipe ends.
- Once the heating process is complete, quickly withdraw the heater plate ensuring that the plate does not rub against the molten pipe ends.
- Press the melted pipe ends together using the specified jointing pressure forming a twin roll back fusion bead. Maintain pressure for sufficient time and further allow the joint to cool for another 30 minutes before exerting any stresses on newly fused joints.

#### b) Sleeve Welding (Electro fusion)

Electro - fusion jointing of HDPE Pipes done with an integral electrical heating coil embedded in the fitting. Welding is carried out by passing a electricity through the coils. The coils, acting as resistors, dissipate heat and melt the surrounding material which expands causing the fittings to be fully fused to the pipe.

### Other Applications :

- \* Industrial Pipe lines for transport of aggressive fluids like acids/gas/brine etc.
- \* Tube Well Pipe Lines with hand pump and suction and delivery pipes in pumps sets.
- \* Gas Pipes for medium and Low pressure range and natural gas/Liquefied gas/Formation gas.
- \* Mines and Factor - for compassed air supply
- \* Cable Pipe Lines/Ducting Pipe Lines
- \* Discharge pipes in the effluent treatment plants
- \* Air conditioning & Ventilation Ducts
- \* Pipes for Jet & Submersible Pumps.

### Properties :

Tensile Strength	: 220-310 Kg/cm <sup>2</sup>
Compression Strength	: 186-248 kg/cm <sup>2</sup>
Impact Strength	: Zero Break
Co-efficient of linear expansion	: 0.20 mm/m <sup>o</sup> C
Vicat Softening Point	: 80 <sup>o</sup> C
Specific Gravity	: 0.94 - 0.96



### Detachable Joints :

#### a) Flanged joint

connect the pipe on - line valve or utility, slip - on flanges of appropriate dimensions and slid over the pipe. Pipe and the end collars are butt welded to the pipe line. With a proper gasket, there is no leakage from the flanged joints.

#### b) Quick release couplers

Where flow pressure is low and where dismantling and shifting is required often, Pipes can be supplied with these couplers welded to the pipe end.



#### c) Insert Transition Joint

Connect the Pipes to threaded pipes/utilities, serrated hose nipples and used. The Pipe's end is heated in an oil bath at 130°C for softening and a wooden cone is used to flare the bore diameter that is required. This flared end receives the serrated portion of the nipple. Leak proof lapping is ensured with Clip/Clamp.

### Selection of HDPE Pipes for Submersible Pumps

Maximum allowable weight the Pipe can with stand when under Internal Pressure in Kgs. PE 80 GRADE

PE80PIPE OF PN6							
← Depth of Bore in meters →							
OD	40	50	60	70	80	90*	
Maximum allowable weight in kgs							
40	100	88	76	63	51	38	
50	154	135	115	96	77	57	
63	239	208	117	146	116	85	
75	339	296	252	208	165	121	
90	479	416	353	290	227	164	
110	720	626	532	438	344	250	

\* Maximum allowable bore depth for PN6 rated pipe

PE80PIPE OF PN8								
← Depth of Bore in meters →								
OD	60	70	80	90	100	110	120*	
Maximum allowable weight in kgs								
32	75	67	59	51	43	35	27	
40	113	101	88	76	64	51	39	
50	179	160	141	121	102	82	63	
63	275	244	213	183	152	121	90	
75	389	345	301	258	214	171	127	
90	553	491	428	365	302	240	177	
110	828	735	641	547	454	360	266	

\* Maximum allowable bore depth for PN8 rated pipe

PE80PIPE OF PN10							
← Depth of Bore in meters →							
OD	60	75	90	105	120	135	150*
Maximum allowable weight in kgs							
25	61	54	46	39	32	25	17
32	99	87	76	64	52	40	28
40	152	133	115	96	78	59	41
50	234	205	176	147	118	89	60
63	369	323	277	231	185	139	93
75	520	455	389	324	259	194	129
90	741	647	553	459	366	271	177
110	1093	953	813	672	532	392	252

\* Maximum allowable bore depth for PN10 rated pipe

PE80PIPE OF PN12.5								
← Depth of Bore in meters →								
OD	60	80	100	120	140	160	180*	
Maximum allowable weight in kgs								
20	51	45	39	33	27	21	14	
25	76	67	57	47	38	29	18	
32	125	109	93	77	62	46	30	
40	194	169	144	120	95	70	46	
50	299	260	222	183	145	106	68	
63	466	405	344	283	222	160	99	
75	668	581	495	408	321	235	148	
90	947	822	697	572	447	323	199	
110	1427	1241	1054	868	681	495	308	

\* Maximum allowable bore depth for PN12.5 rated pipe

For example : 40PN 6 PE80 pipe will bear load of 100Kgs at 40mtrs depth of bore and will bear 38kgs load at 90mtrs depth of bore



#### For Jet Pumps

- SUDHAKAR 32mm / 40mm OD 4Kg. / 6Kg. Pressure Pipes are preferred for jet pumps

The process of fittings is same as that of submersible pumps, However, neither bolting is done nor any clipco type clamps used over to fitted GI Nipple